

KING COUNTY METRO TRANSIT
PASSENGER FACILITIES IMPROVEMENTS
RAPIDRIDE PROGRAM C, D AND E LINES
STANDARD DETAILS

THE DETAILS THAT FOLLOW ARE TO SUPPLEMENT THE REQUIREMENTS IMPOSED BY THE CITY, OR THE CITIES, HAVING JURISDICTION OVER THE AREAS OF WORK INVOLVED IN THIS CONTRACT. IN CASE OF CONFLICT, THE MOST STRINGENT REQUIREMENTS SHALL APPLY. IN CASE THAT ONE OR MORE ELEMENTS OF THE WORK ARE NOT COVERED BY JURISDICTIONAL REQUIREMENTS, THE REQUIREMENTS INCLUDED WITH THE DETAILS THAT FOLLOW SHALL APPLY.

Call
before you
Dig.

1-800-424-5555
UNDERGROUND SERVICE (USA)

RECEIVED
FEB 14 2012
DESIGN &
CONSTRUCTION

▲							DESIGNED: PE/CA/AM	PROJECT MANAGER: L. KRENZEL	SCALE: AS NOTED	 King County Department of Transportation	METRO TRANSIT DIVISION RAPIDRIDE PROGRAM - C, D AND E LINES PASSENGER FACILITIES IMPROVEMENTS	DATE: JUNE 2011
▲							DRAWN: R. BULGER	APPROVED: L. PARRIOT	SITE LOCATION NO:			DRAWING NO: G0.00.1
▲							CHECKED: P ENG	IBIS NO:	ONE INCH AT FULL SIZE 1"			
▲							RECOMMENDED:	WORK REQUEST:	IF NOT ONE INCH, SCALE ACCORDINGLY			
▲							D CRIPPEN	CONTRACT NO: C00635C11				SHEET NO: 1 OF 15
No.	REVISION	BY	APP'D	DATE							STANDARD METRO DETAILS	

V:\Library & Standards\Working Documents\PPM\Metro\PPP - C and D Lines\G0.01.dwg | Layout: G0.01
PLOTTER: Jun 02 2011 04:35:40pm By: Dwyer
XREFS: C182234_RR C & D.dwg
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GENERAL NOTES		STRUCTURAL NOTES		ABBREVIATIONS		SYMBOL LEGEND																																																	
<p>1. THE <u>D100</u> DRAWING SERIES ARE STANDARD CONSTRUCTION DETAILS FOR METRO TRANSIT PASSENGER FACILITIES. REFER TO SITE PLANS FOR APPLICABLE DETAILS.</p> <p>2. DETAILS MAY BE MODIFIED TO FIT EXISTING SITE CONDITIONS. REFER TO NOTES ON PROPOSED SITE PLAN FOR MODIFICATIONS.</p> <p>3. CURB RAMPS SHALL LINE UP WITHIN MARKED CROSSWALK IF NOT SPECIFIED ON PLANS. PROJECT REPRESENTATIVE TO FIELD LOCATE CENTER OF CURB RAMPS PRIOR TO CONSTRUCTION. PROVIDE PROJECT REPRESENTATIVE WITH 48 HOURS NOTICE OF REQUIRING RAMPS TO BE FIELD LOCATED.</p>		<p>1. <u>CODES & STANDARDS</u> INTERNATIONAL BUILDING CODE (IBC) 2009 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE ACI 318 (REVISED 2008)</p> <p>2. <u>ASPHALT PAVEMENT</u> REFER TO TECHNICAL SPECIFICATIONS SECTION 32 12 16 A</p> <p>3. <u>PORTLAND CEMENT CONCRETE PAVEMENT</u> REFER TO TECHNICAL SPECIFICATIONS SECTION 32 13 13--A</p> <p>4. <u>CAST-IN-PLACE CONCRETE</u> REFER TO TECHNICAL SPECIFICATIONS SECTION 03 30 00</p> <p>5. <u>REQUIREMENTS FOR REINFORCED CONCRETE</u> AMERICAN CONCRETE INSTITUTE (ACI) 318 (REVISED 2008). f'c = 4000 PSI fy = 60,000 PSI POZZOLANS = 25% MIN.</p> <p>6. <u>FOUNDATION PRESSURE DATA:</u> ALLOWABLE BEARING PRESSURE = 2.0 KSF. FOUNDATION BEARING SURFACE AND REINFORCING STEEL PLACEMENT SHALL BE APPROVED BY THE KING COUNTY PROJECT REPRESENTATIVE PRIOR TO PLACEMENT OF CONCRETE.</p> <p>7. <u>REINFORCING STEEL GRADE 60</u> a. MINIMUM COVER ON REINFORCING STEEL IN WALLS: EXPOSED TO EARTH - 2" EXPOSED TO WEATHER - 1 1/2" (#5 & SMALLER) b. SLABS ON GRADE, AND FOUNDATIONS: EXPOSED TO EARTH - 3" EXPOSED TO WEATHER - 3" (#5 & SMALLER)</p> <p>8. <u>DETAILING OF REINFORCING STEEL</u> DETAIL IN ACCORDANCE WITH ACI 318-08. a. SUBMIT REINFORCING STEEL DETAILS FOR APPROVAL PRIOR TO FABRICATION AND PLACEMENT. b. SUBMIT SHOP FABRICATION DRAWINGS ON ALL PRECAST CONCRETE TO KING COUNTY PROJECT REPRESENTATIVE FOR APPROVAL PRIOR TO FABRICATION.</p> <p>9. <u>DESIGN LOADING</u> ROOF SNOW LOAD = 25 PSI BASIC WIND SPEED = 85 MPH WIND EXPOSURE B SEISMIC DESIGN CATEGORY D SEISMIC SITE CLASS D</p> <p>10. <u>CONDUIT</u> UNDERGROUND ELECTRICAL OR COMMUNICATION CONDUIT SHALL BE PVC SCHEDULE 80, 1" DIAMETER MINIMUM UNLESS STATED OTHERWISE. CONDUITS UNDER PAVEMENT AND WITHIN FURNITURE FOUNDATIONS SHALL BE RIGID GRS.</p> <p>11. <u>STRUCTURAL FILLS</u> REFER TO TECHNICAL SPECIFICATIONS SECTION 31 00 00</p>		<p>ACP ASPHALT CONCRETE PAVEMENT # NUMBER @ AT ON CENTER O.C. ON CENTER APPROX APPROXIMATELY PCCP PORTLAND CEMENT APWA AMERICAN PUBLIC CONCRETE PAVEMENT WORKS ASSOCIATION PL. PLACE AVE AVENUE PP POWER POLE CB CATCH BASIN PSI POUNDS PER CL CLEAR SQUARE INCH CO CEAN OUT PVC POLYVINYLCHLORIDE CONC CONCRETE R RADIUS DWG DRAWING RD ROAD IE INVERT ELEVATION REF FOR REFERENCE ONLY E EAST R/W RIGHT OF WAY E.J. EXPANSION JOINT S SOUTH EH ELECTRIC HANDHOLE SEC SECTION EXIST EXISTING SB SIGN-BUS SIGN EV ELECTRIC VALVE SW SOUTHWEST EW EACH WAY SQ SQUARE FH FIRE HYDRANT SS STAINLESS STEEL GA GUY ANCHOR STL STEEL GRS GALVANIZED RIGID STEEL ST STREET GV GAS VALVE STD STANDARD HMA HOT MIXED ASPHALT STS STREET SIGN HORIZ HORIZONTAL TOP TOP OF WALL HT HEIGHT TP TOP OF PAD HWY HIGHWAY TPD TELEPHONE PEDESTAL L.F. LINEAR FOOT TRH TRAFFIC HANDHOLE LP LIGHT POLE TSP TRAFFIC SIGNAL POLE LR LITTER RECEPTACLE TW TOP OF WALL MAX MAXIMUM TYP TYPICAL MH MANHOLE VERT VERTICAL MIN MINIMUM W WEST MIC MOMUMENT IN CASE W/ WITH MON SURFACE MONUMENT WM WATER METER N NORTH W/O WITH OUT NC NATIONAL COARSE WV WATER VALVE NE NORTHEAST N.I.C. NOT IN CONTRACT NO. NUMBER</p>		<p>2% DIRECTION OF DRAINAGE AND SLOPE SIGN (EXISTING) SIGN (NEW) FENCE DITCH WITH SLOPE AND FLOW INDICATORS PROPERTY LINE CENTER LINE NEW CONCRETE PAVEMENT ROAD PAVEMENT REMOVAL EXISTING UTILITY POLE EXISTING LIGHT POLE NEW LIGHT POLE DECIDUOUS TREE EVERGREEN TREE BUSH OR SHRUB EXISTING SPOT ELEVATION FINISHED ELEVATION COLUMN MOUNTED LITTER RECEPTACLE LITTER RECEPTACLE BENCH (1' x 4') BLADE MARKER MONUMENT/TBM TECH PYLON W/ OVERHEAD REAL TIME DISPLAY (1.5'x 5' & 1'x 5') BIKE LOOP RAPID RIDE SHELTER FOOTING WITH DASHED ROOF OVERHANG OUTLINE ELECTRICAL HANDHOLE</p>																																																	
INDEX TO DRAWINGS				TYPICAL ELEVATION, SECTION AND DETAIL NUMBERING CONVENTIONS																																																			
<table><tr><th>SHEET NO.</th><th>DRAWING NO.</th><th>DRAWING TITLE</th></tr><tr><td>1</td><td>G0.00</td><td>COVER SHEET</td></tr><tr><td>2</td><td>G0.01</td><td>GENERAL NOTES, STRUCTURAL NOTES, SYMBOL, LEGEND & ABBREVIATIONS</td></tr><tr><td>3</td><td>G0.02</td><td>RAPID RIDE FACILITY NOTES</td></tr><tr><td>4</td><td>D101</td><td>RAPID RIDE SHELTER FOOTING SECTIONS & DETAILS</td></tr><tr><td>5</td><td>D102</td><td>RAPID RIDE TECH PYLON AND BLADE MARKER FOUNDATION DETAILS</td></tr><tr><td>6</td><td>D103</td><td>STANDARD SHELTER FOOTING PLANS, SECTIONS AND DETAILS</td></tr><tr><td>7</td><td>D104</td><td>SECTIONS AND DETAILS</td></tr><tr><td>8</td><td>D105</td><td>DETAILS</td></tr><tr><td>9</td><td>D106</td><td>COUNTERFORT WALL SECTIONS</td></tr><tr><td>10</td><td>D107</td><td>MISCELLANEOUS SECTIONS AND DETAILS</td></tr><tr><td>11</td><td>D108</td><td>MISCELLANEOUS SECTIONS & DETAILS</td></tr><tr><td>12</td><td>D109</td><td>MISCELLANEOUS SECTIONS AND DETAILS</td></tr><tr><td>13</td><td>D110</td><td>CURB RAMP CONSTRUCTION DETAILS</td></tr><tr><td>14</td><td>D111</td><td>INTERNAL SOLAR SHELTER LIGHTING - GROUNDING DETAIL</td></tr><tr><td>15</td><td>D112</td><td>HANDHOLE CONDUIT DETAILS</td></tr></table>		SHEET NO.	DRAWING NO.	DRAWING TITLE	1	G0.00	COVER SHEET	2	G0.01	GENERAL NOTES, STRUCTURAL NOTES, SYMBOL, LEGEND & ABBREVIATIONS	3	G0.02	RAPID RIDE FACILITY NOTES	4	D101	RAPID RIDE SHELTER FOOTING SECTIONS & DETAILS	5	D102	RAPID RIDE TECH PYLON AND BLADE MARKER FOUNDATION DETAILS	6	D103	STANDARD SHELTER FOOTING PLANS, SECTIONS AND DETAILS	7	D104	SECTIONS AND DETAILS	8	D105	DETAILS	9	D106	COUNTERFORT WALL SECTIONS	10	D107	MISCELLANEOUS SECTIONS AND DETAILS	11	D108	MISCELLANEOUS SECTIONS & DETAILS	12	D109	MISCELLANEOUS SECTIONS AND DETAILS	13	D110	CURB RAMP CONSTRUCTION DETAILS	14	D111	INTERNAL SOLAR SHELTER LIGHTING - GROUNDING DETAIL	15	D112	HANDHOLE CONDUIT DETAILS			<p>ELEVATIONS DRAWING ON WHICH ELEVATION APPEARS. INDICATES THE DRAWING IS ON THE SAME SHEET. ELEVATION NUMBER</p> <p>SECTIONS SECTION LETTER DRAWING ON WHICH SECTION APPEARS. INDICATES THE DRAWING IS ON THE SAME SHEET.</p> <p>DETAILS DETAIL NUMBER DRAWING ON WHICH DETAIL APPEARS. INDICATES THE DRAWING IS ON THE SAME SHEET.</p> <p>DETAIL & SECTION LABELS SECTION LETTER OR DETAIL NUMBER SCALE: 1/2" = 1'-0" DRAWING ON WHICH DETAIL APPEARS. INDICATES THE DRAWING IS ON THE SAME SHEET.</p> <p>Call before you Dig. 1-800-424-5555 UNDERGROUND SERVICE (USA)</p>			
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APPLICABILITY

GENERAL NOTES

- ### WORK SCHEDULE NOTES

- EROSION CONTROL NOTES

- ### UTILITY NOTES

4. ADJUST TO NEW GRADE ALL MANHOLES, CATCH BASINS, BOXES AND HAND HOLES.

1. WHEN THE WORK SITE IS UNATTENDED, INSTALL A SIGN WITH MINIMUM TWO-INCH LETTERS STATING PERMITTEE OR COMPANY NAME, AND DAY AND EVENING PHONE NUMBERS.
2. INSTALL BARRICADES, SIGNS, WARNING LIGHTS, AND SAFETY DEVICES SUFFICIENT TO NOTIFY PUBLIC OF OBSTRUCTIONS OR TRAFFIC HAZARDS. DEVICES MUST REMAIN UNTIL THE OBSTRUCTIONS OR TRAFFIC HAZARDS ARE CLEARED.
3. MAINTAIN ACCESS TO FIRE STATIONS, FIRE HYDRANTS, FIRE ESCAPES, AND FIRE FIGHTING EQUIPMENT.
4. MAINTAIN ACCESS TO PROPERTY AND BUSINESSES ADJOINING THE SITES OF WORK. FURNISH, INSTALL AND MAINTAIN TEMPORARY "BUSINESSES ARE OPEN" SIGNS AT LOCATION DESIGNATED BY THE PROJECT REPRESENTATIVE. REMOVE UPON COMPLETION OF WORK.
5. PRESERVE AND PROTECT ALL PROPERTIES ADJOINING THE SITES OF WORK.
6. RESTORE AREAS DISTURBED BY THE WORK TO ORIGINAL OR BETTER CONDITION. REPAIR OR REPLACE DAMAGED ITEMS AS DIRECTED BY AND TO THE SATISFACTION OF THE PROJECT REPRESENTATIVE.
7. DO NOT DISTURB SURVEY MONUMENTS AND MARKERS WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE CITY HAVING JURISDICTION AND FROM THE PROJECT REPRESENTATIVE. REPLACEMENT OR RESETTING OF DISTURBED MONUMENTS AND MARKERS SHALL BE BY A WASHINGTON STATE LICENSED LAND SURVEYOR.
8. INSTALL TEMPORARY ADA-COMPLIANT SIDEWALK OR CURB RAMPS IF PERMANENT RAMPS ARE BLOCKED. IF IT WERE INFEASIBLE TO PROVIDE TEMPORARY RAMPS, PROVIDE APPROPRIATE ACCESS DETOURS, WITH THE CORRESPONDING SIGNAGE AND AT LOCATIONS APPROVED BY THE PROJECT REPRESENTATIVE.
9. COVER OPEN EXCAVATION WITH NON-SKID STEEL PLATES RAMPED TO ELEVATION OF CONTIGUOUS SURFACES.
10. MATERIAL STOCKPILING AT THE SITES OF WORK SHALL BE MAINTAINED TO A MINIMUM AND ONLY AS APPROVED BY CITY INSPECTORS, AFFECTED PROPERTY OWNERS AND THE PROJECT REPRESENTATIVE. MATERIALS SHALL BE STORED AS NECESSARY TO PROTECT THE PUBLIC.
11. WHERE TRAFFIC LANES AND SIDEWALK CLOSURES ARE REQUIRED, IMPLEMENT THEM AS NECESSARY TO MINIMIZE PUBLIC IMPACT AND IN STRICT CONFORMANCE WITH THE CORRESPONDING, CITY-APPROVED, TRAFFIC CONTROL PLANS.
12. UNLESS INDICATED OTHERWISE IN THE CONDITIONS OF THE CORRESPONDING PERMITS, COMPLETE CONCRETE AND OTHER SURFACING OR RESURFACING WORK UNDER THE FOLLOWING SCHEDULE:
 - A. IN PRINCIPAL ARTERIALS AND MAJOR COLLECTOR STREETS: WITHIN 3 CALENDAR DAYS.
 - B. IN OTHER STREETS: WITHIN 7 CALENDAR DAYS.

1. CALL 1-800-424-5535 FOR LOCATING UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO BEGINNING SITE WORK.
2. AT LEAST FIVE (5) WORKING DAYS PRIOR TO MOBILIZATION AND CLOSING OF ANY BUS STOP, CONTACT METRO TRANSIT CONSTRUCTION COORDINATOR AT (206) 684-2785 TO COORDINATE POSTING RIDER ALERT ABOUT BUS STOP CLOSURE AND ESTABLISHMENT OF INTERIM BUS ZONES.
3. WHEN ENCOUNTERING CONSTRUCTION SITES WITH EXISTING TRANSIT FURNITURE SUCH AS SHELTERS, PEDESTRIAN LIGHT POST AND LUMINARIES, BENCHES, LITTER RECEPTACLES AND BUS STOP SIGNS AND POSTS EXIST, CALL PAUL SORENSEN (206-684-2254) OR ROBIN ABILLE (206-684-2260) OF TRANSIT SOUTH FACILITIES AT LEAST 72 HOURS PRIOR TO MOBILIZATION SO THEY CAN HAVE THE FURNITURE AND FIXTURES REMOVED AND SALVAGED TO METRO TRANSIT.
4. AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION AT A SITE OF WORK, CONTACT DOUG MUSSELMAN-BROWN OF SEATTLE TIMES AT (206) 423-4384 OR EMAIL DMBROWN@SEATTLETIMES.COM TO HAVE NEWSPAPER BOXES REMOVED FROM THE SITE.
5. REMOVE DEMOLITION DEBRIS FROM THE WORK SITES AT THE END OF EACH DAY AND DISPOSE OF IT AT LEGALLY APPROVED SITES.
6. UNLESS OTHERWISE SPECIFIED ON THE SITE PLANS, EXISTING PEDESTRIAN LIGHT POLE FOUNDATIONS DESIGNATED TO BE REMOVED SHALL BE TAKEN OUT ENTIRELY. ELECTRICAL CONNECTORS SHALL BE REMOVED FROM THE CONDUITS FROM HAND-HOLE TO THE EXISTING FOUNDATION. IF THE CONDUIT IS EXPOSED, REMOVE IT FROM FOUNDATION TO THE HANDHOLE, OTHERWISE CAP OR PLUG AND ABANDON IN PLACE. PLUG CONDUIT HOLE AT HAND-HOLE.

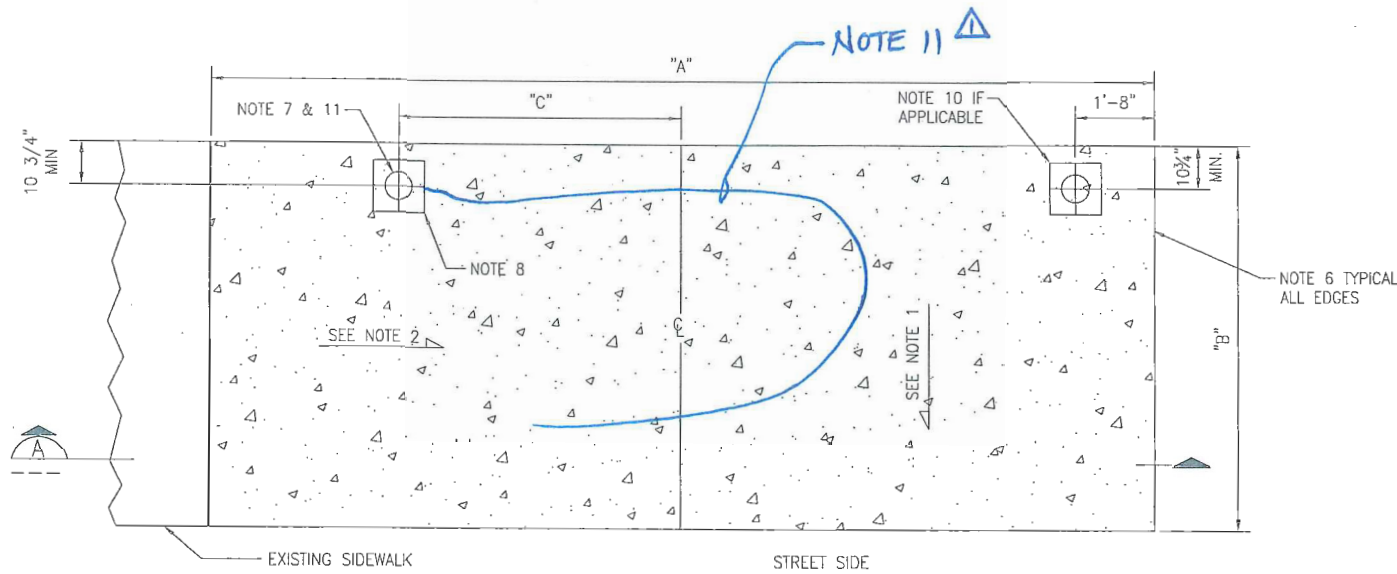
- ### SITE RESTORATION NOTES

- NEW SITE FURNITURE/FIXTURE NOTES

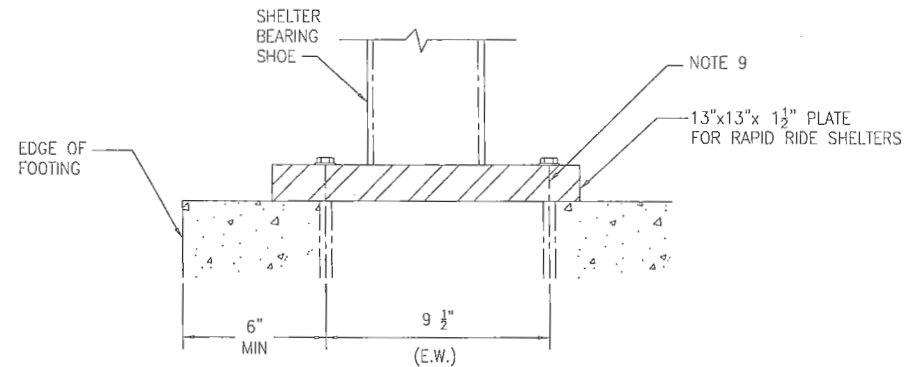
1. BENCHES, LITTER RECEPTACLES AND BIKE LOOPS: METRO TRANSIT WILL FURNISH, TRANSPORT AND INSTALL THE SITE FURNITURE AT EACH BUS ZONE.
2. PEDESTRIAN LIGHT POLES AND LUMINARIES: CONTRACTOR SHALL BE RESPONSIBLE TO INSTALL FOUNDATIONS FOR PEDESTRIAN LIGHT POLES AND LUMINARIES. TASKS SHALL INCLUDE PROVIDING AND INSTALLING J-BOLTS, CONDUITS, GROUNDING RODS, REBARS, AND OTHER MATERIALS FOR THE FOUNDATIONS. OBTAIN LUMINARY BOLT CIRCLE PRIOR TO SETTING FOUNDATIONS. UNLESS STATED OTHERWISE ON THE ELECTRICAL SITE PLANS, METRO TRANSIT WILL SUPPLY PEDESTRIAN LIGHT POLES AND LUMINARIES. CONTRACTOR SHALL PICK UP AND TRANSPORT THE LIGHTING HARDWARE FROM METRO SOUTH FACILITIES TO EACH PROJECT SITE. METRO'S SOUTH FACILITIES IS LOCATED AT 11911 EAST MARGINAL WAY S, BUILDING C, TUKWILA, WASHINGTON 98168. CONTACT PAUL SORENSEN AT (206) 684-2260 AT LEAST 72 HOURS IN ADVANCE. CONTRACTOR SHALL PROVIDE ALL HARDWARE REQUIRED TO CONNECT AND THE PEDESTRIAN LUMINARIES TO THE POWER PEDESTAL OR OTHER POWER SOURCE AS SHOWN ON ELECTRICAL PLANS AND TO MAKE THE LUMINARIES FUNCTIONAL.
3. BUS SHELTERS, TECHNOLOGY PYLONS, AND BLADE MARKERS: METRO TRANSIT WILL PROVIDE, TRANSPORT, AND INSTALL THE RAPIDRIDE FIXTURES/FURNITURE UPON COMPLETION OF THE SITE WORK, INCLUDING THE POWER CONNECTION FROM THE FOUNDATIONS TO THE FIXTURES/FURNITURE. CONTRACTOR SHALL PROVIDE CONDUITS AND PULL CONDUCTORS BETWEEN POWER SOURCE AND THE FOUNDATIONS.
4. BUS SIGNS. UNLESS OTHERWISE SPECIFICALLY INDICATED ON THE DRAWINGS, METRO TRANSIT WILL FURNISH AND INSTALL BUS SIGNS AT THE RAPIDRIDE ZONES.
5. OTHER FURNITURE AND HARDWARE NOT MENTIONED IN THIS LIST: FURNISH AND INSTALL OTHER FURNITURE/HARDWARE NOT LISTED BUT SHOWN ON THE DRAWINGS.

1-800-424-5555
UNDERGROUND SERVICE (USA)

[illegible]



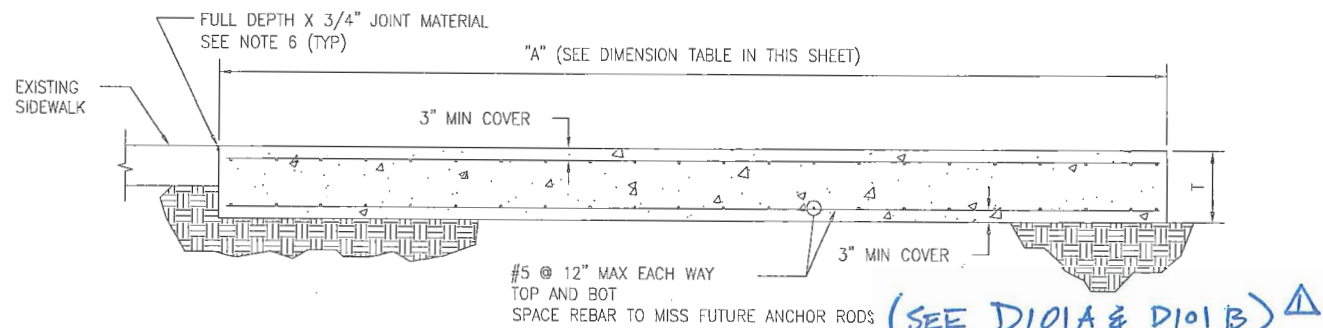
FOOTING PLAN
SCALE: 1/2"=1'-0"
(SEE FOOTING DIMENSION CHART THIS SHEET)



**SHELTER REAR LEG
INSTALLATION DETAIL**
NOT TO SCALE

GENERAL NOTES

- 1 PROVIDE 2% SLOPE TOWARDS STREET TO ASSURE PROPER DRAINAGE OF SURFACE WATER UNLESS DIFFERENT SLOPE IS SPECIFIED ON SITE SPECIFIC PLAN.
- 2 MATCH TO EXISTING SIDEWALK SLOPE TO ASSURE PROPER DRAINAGE OF SURFACE WATER UNLESS DIFFERENT SLOPE IS SPECIFIED ON SITE SPECIFIC PLAN.
- 3 CONTRACTOR SHALL COORDINATE WORK WITH RELATED WORK INCLUDING ELECTRICAL.
- 4 VERIFY AND LOCATE ALL EXISTING UTILITIES PRIOR TO STARTING WORK; CONDUCT OPERATIONS IN A MANNER WHICH ENSURES THAT THE UTILITIES WILL NOT BE DISTURBED OR ENDANGERED, AND ASSUME FULL RESPONSIBILITY FOR ANY DAMAGE TO UTILITIES DURING CONSTRUCTION. METRO DOES NOT ASSUME RESPONSIBILITY FOR REIMBURSEMENT, PARTICIPATION IN DESIGN AND/OR REVISIONS, OR LIABILITY FOR ACCURACY OF TYPE, SIZE, AND LOCATION OF ANY UTILITY.
- 5 COORDINATE THE REQUIREMENTS FOR LOCATION, PROTECTION, AND/OR RELOCATION OF UTILITIES WITH THE UTILITY OWNER PRIOR TO STARTING WORK.
- 6 ISOLATION JOINT BETWEEN FOOTING AND ADJACENT SIDEWALK OR IMPROVEMENTS
- 7 ELECTRICAL CONDUIT LOCATION. SEE D-111 FOR DETAILS.
- 8 SHELTER FOOTING REAR ANCHOR BY OTHERS. SEE DETAIL 1 FOR MINIMUM EDGE DISTANCE FROM BACK OF FOOTING
- 9 ANCHOR ROD (4 TYP. BY OTHERS). 1" S. S. THREADED ROD. 8 1/4" MIN EMBED. EPOXY WITH HILTI HIT-HY 150 ADHESIVE, WITH 6" MIN EDGE DISTANCE. FOLLOW HILTI INSTALLATION INSTRUCTIONS
- 10 FOR INTERIM INSTALLATION OF A STANDARD F22 FRAME ON A RR-20 FOOTING, ALSO INSTALL AN ELECTRICAL CONDUIT AT THIS LOCATION. (REAR RIGHT SHELTER LEG.)
- 11 SEE GROUNDING ELECTRODE INSTALLATION DETAILS ON SHEET D111 FOR SHELTERS TO RECEIVE SOLAR LIGHTS.



FOOTING SECTION
SCALE: 1/2"=1'-0"
A

RAPIDRIDE FOOTING DIMENSIONS AND QUANTITIES

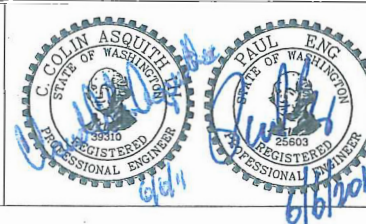
STRUCTURE TYPE	FOOTING TYPE	LENGTH 'A' (MIN)	WIDTH 'B' (MIN)	'C'	THICKNESS 'T' (MIN)	CONCRETE (CY)	REBAR (LBS)
RR-124, RR-125, RR-126	RR-10	9'-8"	4'-4"	3'-3 1/4"	1'-2"	2	190
RR-206, RR-208, RR-208B	RR-15	15'-0"	8'-0"	6'-1 1/4"	1'-6"	7	532
RR-20	RR-20	20'-0"	5'-0"	6'-1 1/4"	1'-6"	6	451
STANDARD F-22	RR-20	20'-0"	5'-0"	6'-1 1/4"	1'-6"	6	451

(SEE NOTE 10)

**Call
before you
Dig.**

1-800-424-5555
UNDERGROUND SERVICE (USA)

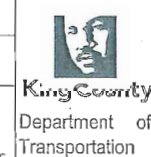
No.	REVISION	BY	APP'D	DATE
1	REBAR SPACING & GROUNDING	PE		2/15/2012



DESIGNED:
PE/C/A/AM
DRAWN:
R. BULGER
CHECKED:
P. ENG
RECOMMENDED:
D. CRIPPEL

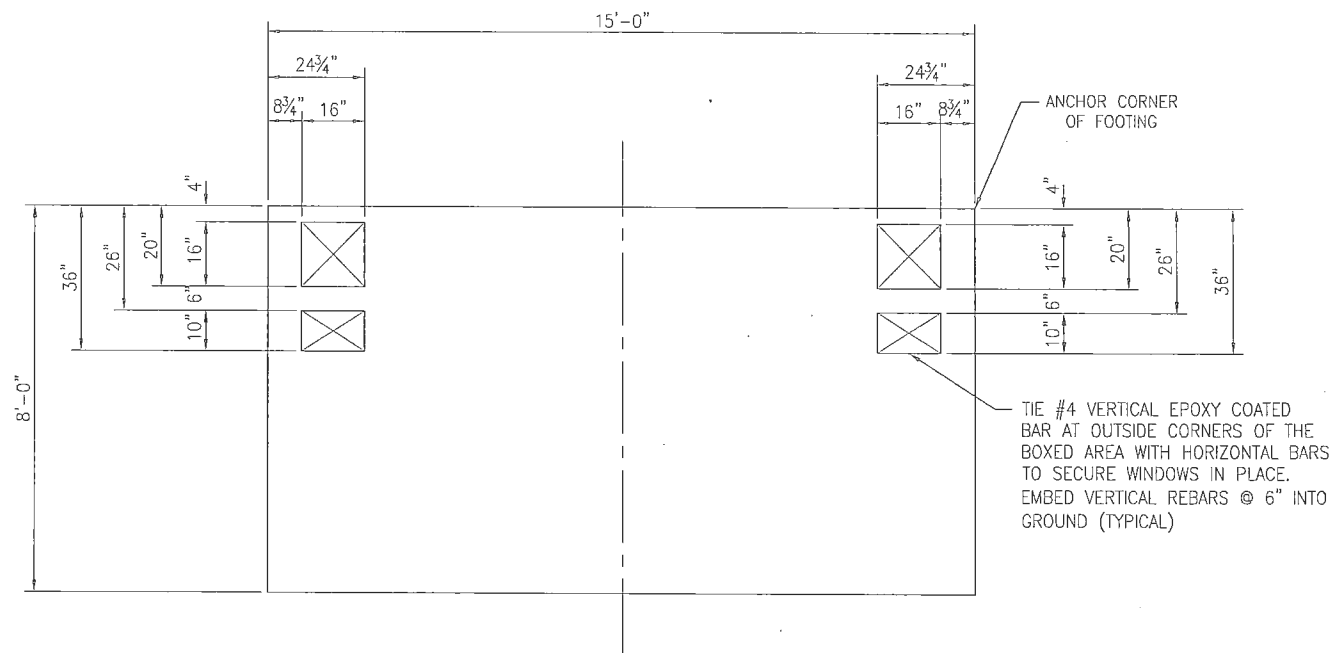
PROJECT MANAGER:
L. KRINZEL
APPROVED:
L. PARIOT
IBIS NO.:
WORK REQUEST:
CONTRACT NO.:
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SCALE:
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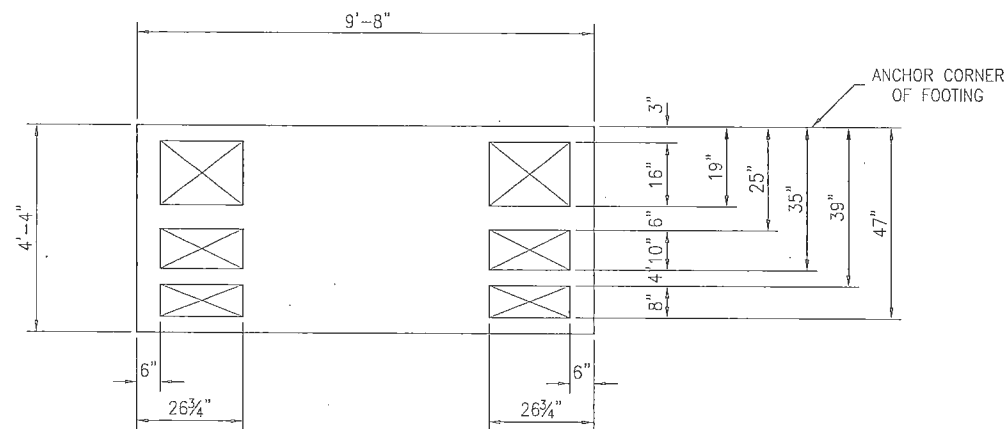


METRO TRANSIT DIVISION
RAPIDRIDE PROGRAM - C, D AND E LINES
PASSENGER FACILITIES IMPROVEMENTS
RAPID RIDE SHELTER
FOOTING PLAN, SECTIONS AND DETAILS

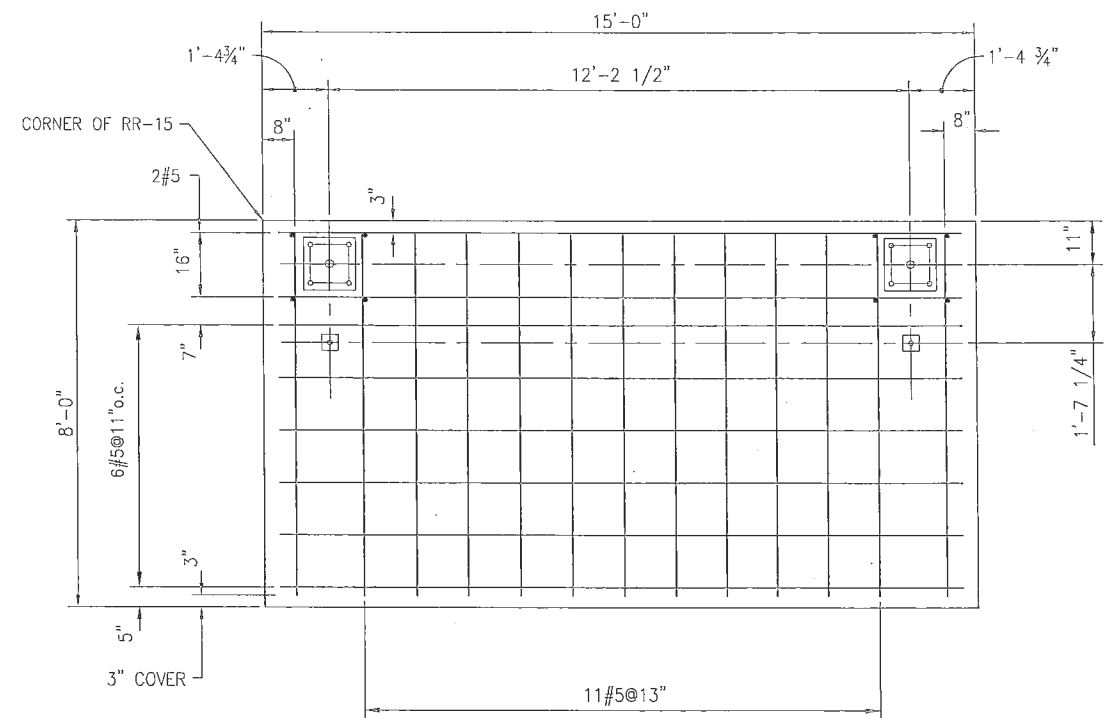
DATE:
JUNE 2011
DRAWING NO.:
D101
SHEET NO. 4 OF 15



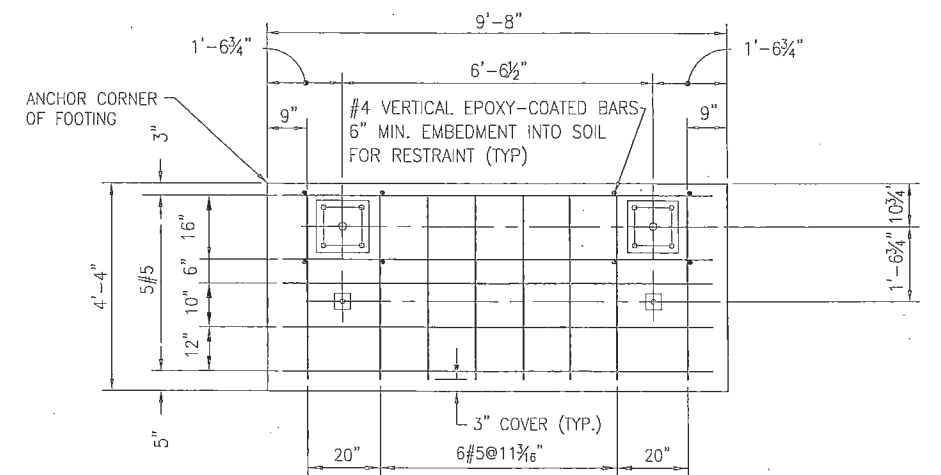
RAPID RIDE RR-15 SHELTER FOOTING (FOR RR206/RR208/RR208B)
REBAR BLOCKOUTS FOR SHELTER ANCHOR BOLTS
SCALE: 1/2" = 1'-0"



RAPID RIDE RR-10 SHELTER FOOTING
REBAR BLOCKOUTS FOR SHELTER ANCHOR BOLTS
SCALE: 1/2" = 1'-0"



RAPID RIDE RR-15 SHELTER FOOTING (FOR RR206/RR208/RR208B)
SCALE: 1/2" = 1'-0"



RAPID RIDE RR-10 SHELTER FOOTING (RR124/RR125/RR126)
REINFORCEMENT LAYOUT DETAILS
SCALE: 1/2" = 1'-0"

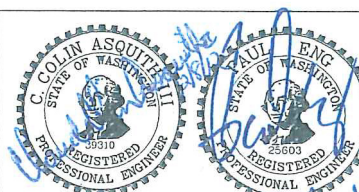
Call
before you
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1-800-424-5555
UNDERGROUND SERVICE (USA)



METRO TRANSIT DIVISION
RAPID RIDE PROGRAM - C, D AND E LINES
PASSENGER FACILITIES IMPROVEMENTS
RAPID RIDE SHELTER FOOTING
REBAR LAYOUT DETAILS

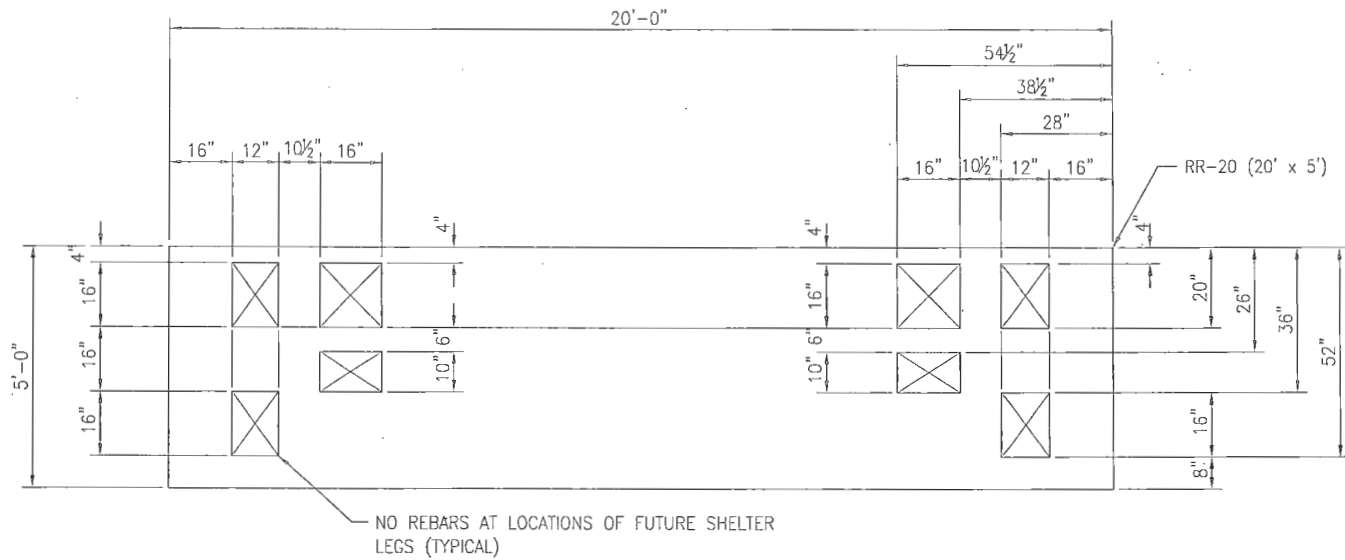
DATE:
FEB 2012
DRAWING NO:
D101A
SHEET NO: 5 OF 17



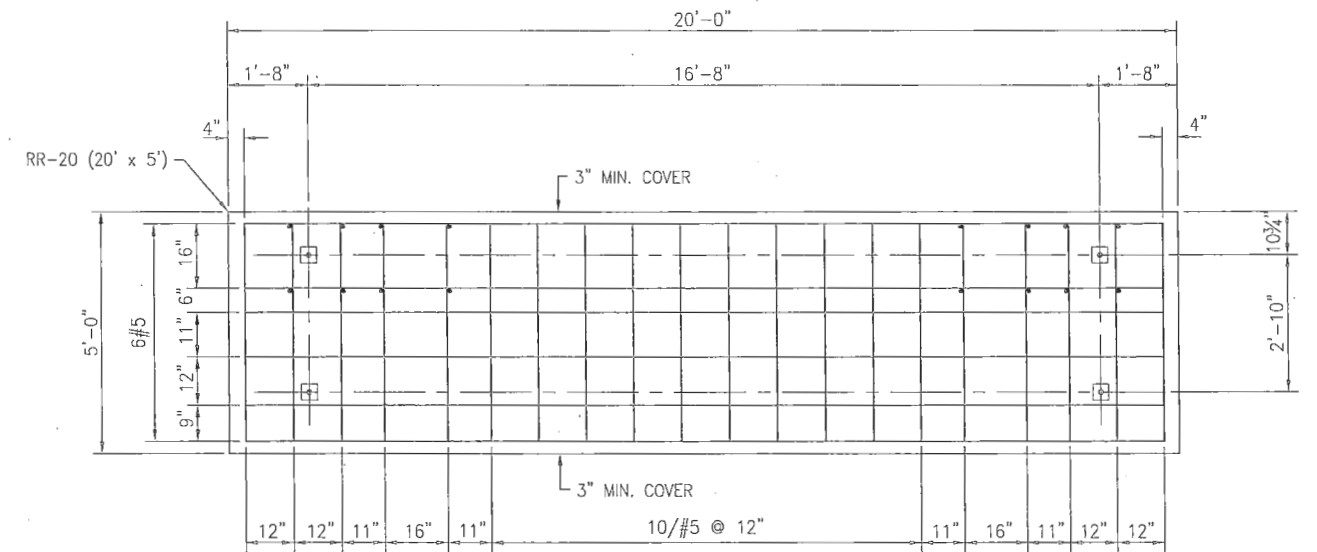
DESIGNED:
PE/CA/AM
L. KRENZEL
DRAWN:
R. BULGER
CHECKED:
P. ENG
RECOMMENDED:
D. CRIPPEN
PROJECT MANAGER:
L. KRENZEL
APPROVED:
L. PARROT
TBS NO:
WORK REQUEST:
CONTRACT NO:

SCALE:
AS NOTED
SITE LOCATION NO:
ONE INCH AT FULL
SIZE
IF NOT ONE INCH, SCALE
ACCORDINGLY

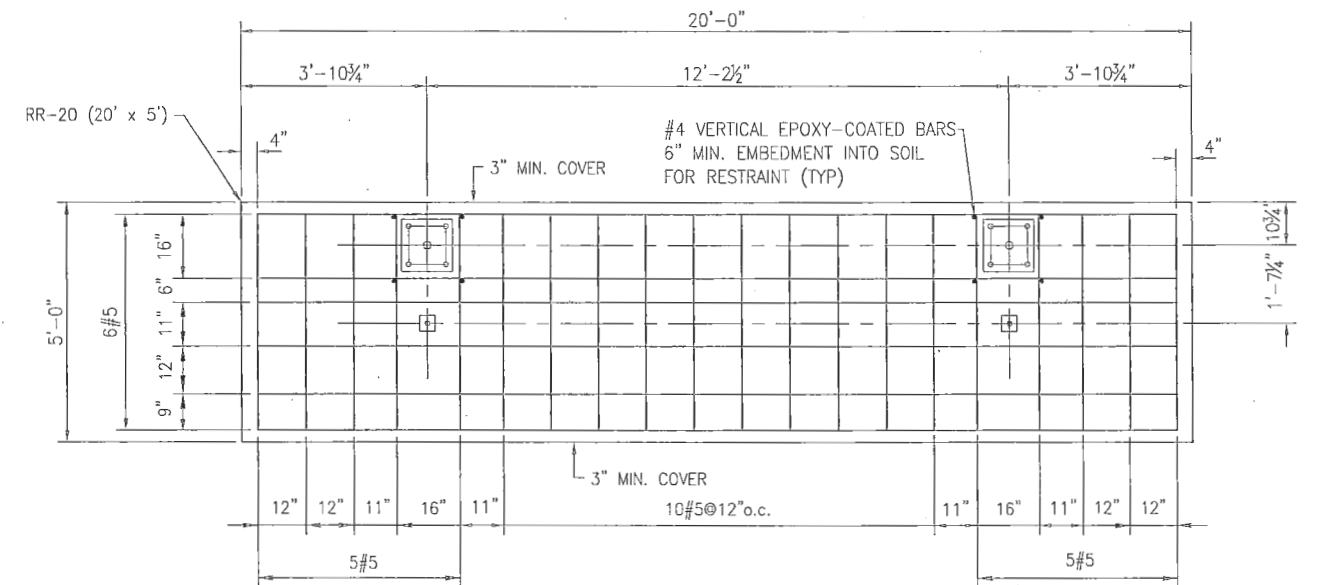
No.	REVISION	BY	APP'D	DATE
1	REBAR LAYOUT DETAILS	RB	PE	12/11



RAPID RIDE RR-20 SHELTER FOOTING (FOR RR206/RR208/RR208B/F22)
REBAR BLOCKOUTS FOR SHELTER ANCHOR BOLTS
SCALE : 1/2" = 1'-0"



RAPID RIDE RR-20 SHELTER FOOTING (FOR F-22)
SCALE : 1/2" = 1'-0"



RAPID RIDE RR-20 SHELTER FOOTING (FOR RR206/RR208)
SCALE : 1/2" = 1'-0"

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UNDERGROUND SERVICE (USA)

No.	REVISION	BY	APP'D	DATE
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

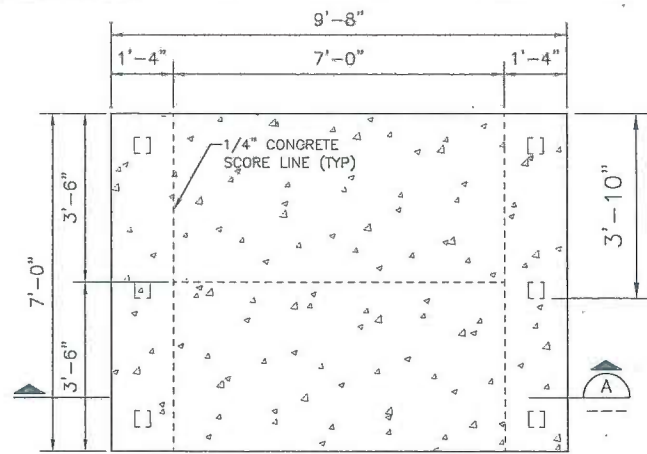


DESIGNED: PE/CA/AM	PROJECT MANAGER: L. KRENZEL	SCALE: AS NOTED
DRAWN: R. BULGER	APPROVED: L. PARRIOT	SITE LOCATION NO:
CHECKED: R. ENG	IBIS NO:	ONE INCH AT FULL SIZE
RECOMMENDED: D. CRIPPEN	WORK REQUEST: CONTRACT NO:	IF NOT ONE INCH, SCALE ACCORDINGLY

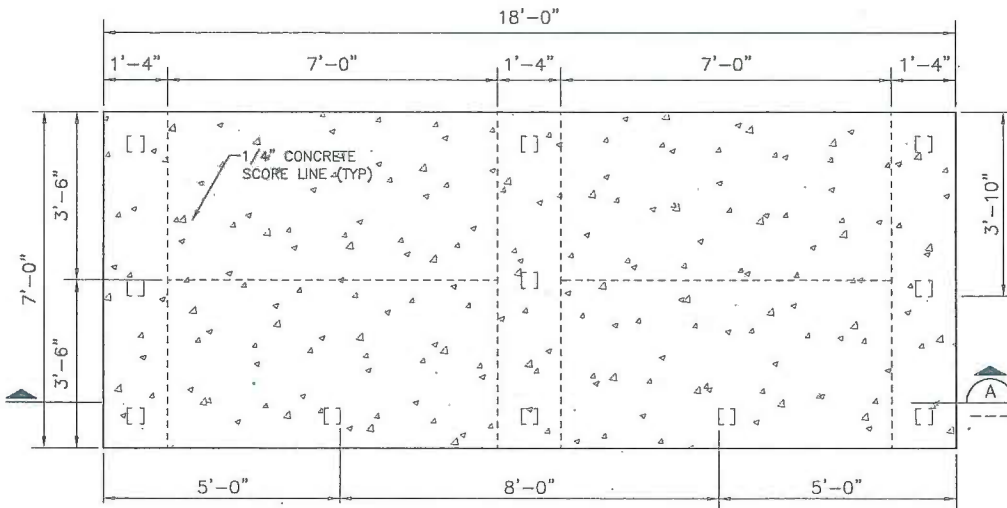


METRO TRANSIT DIVISION
RAPIDRIDE PROGRAM - C, D AND E LINES
PASSENGER FACILITIES IMPROVEMENTS
RAPID RIDE SHELTER FOOTING
REBAR LAYOUT DETAILS

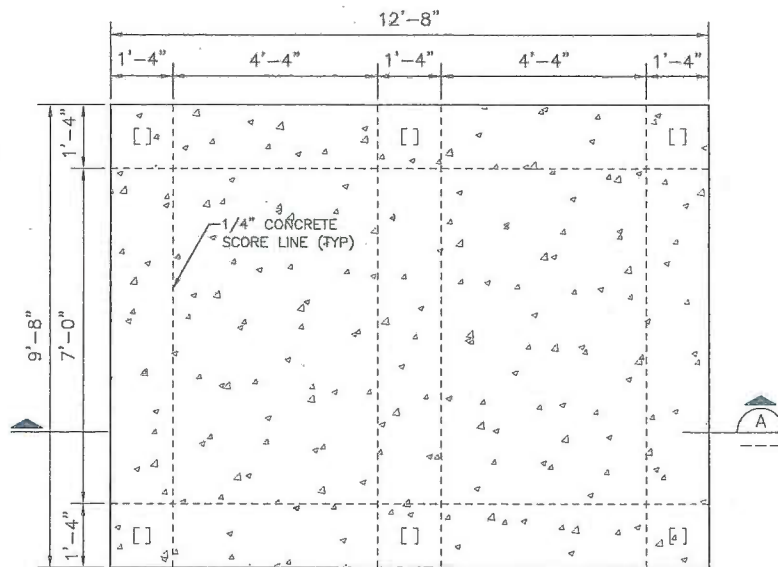
DATE: FEB 2012
DRAWING NO: D101B
SHEET NO: 6 OF 17



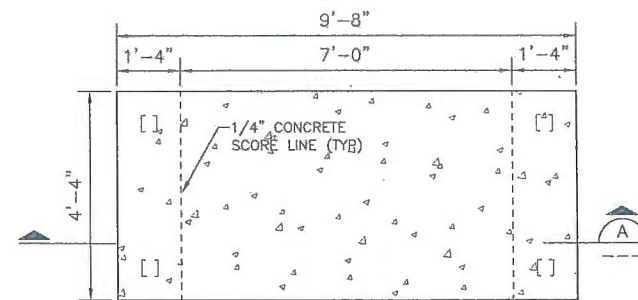
B11 FOOTING
SCALE: 1/2" = 1'-0"



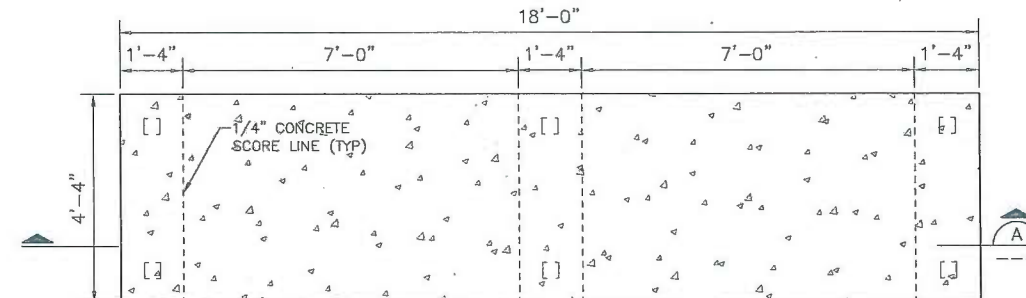
B12 FOOTING
SCALE: 1/2" = 1'-0"



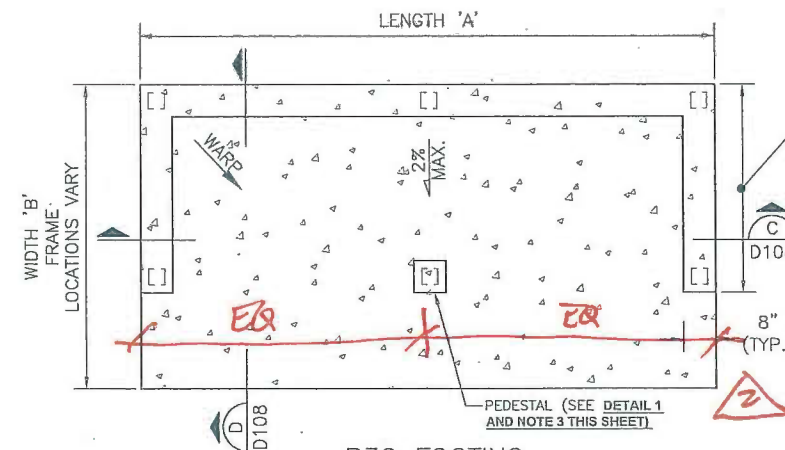
B13 FOOTING
SCALE: 1/2" = 1'-0"



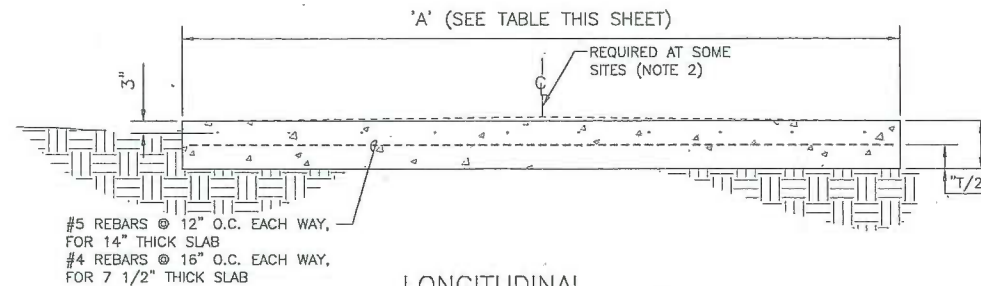
B21 FOOTING
SCALE: 1/2" = 1'-0"



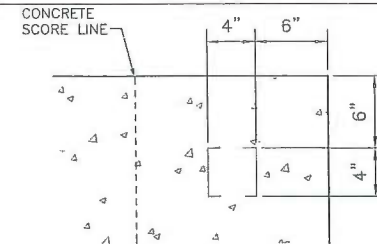
B22 FOOTING
SCALE: 1/2" = 1'-0"



B30 FOOTING
SCALE: 1/2" = 1'-0"



LONGITUDINAL SECTION
SCALE: 1/2" = 1'-0"



TYPICAL LEG DETAIL
@ CORNER
SCALE: 1 1/2" = 1'-0"

TYPICAL CONDITION FOR ALL EXCEPT B30, B31, AND B32 SERIES FOOTING

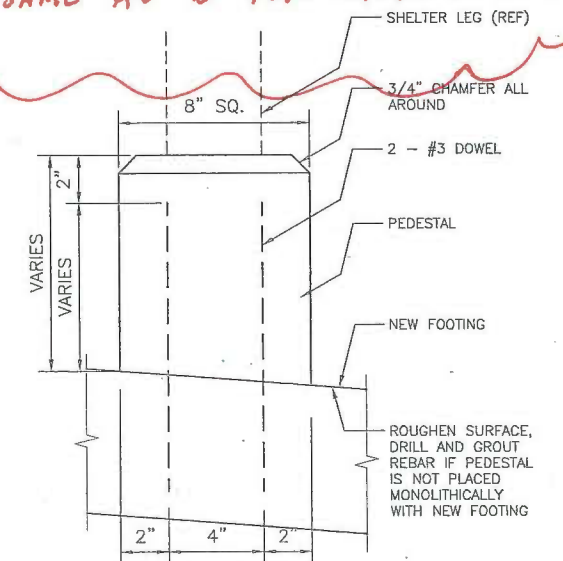
FOOTING DIMENSIONS				
FOOTING TYPE	SHELTER FRAME TYPE	LENGTH 'A'	WIDTH 'B'	SLAB THICKNESS 'T'
B11	PER PLAN	9'-8"	7'-0"	7 1/2"
B12	PER PLAN	18'-0"	7'-0"	7 1/2"
B13	PER PLAN	12'-8"	9'-8"	7 1/2"
B21	PER PLAN	9'-8"	4'-4"	14"
B22	PER PLAN	18'-0"	4'-4"	14"
B31	F11	9'-0"	6'-4"	7 1/2"
B31	F21	9'-0"	4'-4"	14"
B31	F31 OR F51	9'-0"	4'-4"	14"
B32	F12	17'-4"	6'-4"	7 1/2"
B32	F13	12'-0"	9'-0"	7 1/2"
B32	F14	17'-4"	6'-4"	7 1/2"
B32	F22 OR F52	17'-4"	4'-4"	14"
B32	F32	17'-4"	4'-4"	14"

GENERAL NOTES:

- "O" INDICATES AREAS FOR FUTURE SHELTER LEGS. AVOID PLACING REINFORCEMENT IN THESE AREAS.
- FOR SITES WITH SLOPES LESS THAN 0.5% IN 'A' DIMENSION, INCREASE DIMENSION AT MIDDLE OF FOOTING BY 1" TO ASSURE PROPER DRAINAGE OF SURFACE WATER.
- WHEN USING B-32 FOOTING WITH DOUBLE FRAMES, SUPPORT FRONT MIDDLE LEG(S) OF FRAME AS REQUIRED TO PROVIDE THE SAME TOP ELEVATION AS THE PERIMETER WALL.
- INSTALL ISOLATION JOINT BETWEEN SHELTER FOOTING AND ADJACENT SIDEWALK OR IMPROVEMENTS. SEE DETAIL 2/D101.

4'-4" FOR F20 AND F30 FRAMES.
3'-4" FOR F50 FRAMES.
SAME AS "B" FOR OTHER FRAMES

3'-8" FOR F20 FRAMES
2'-8" FOR F50 & F30 FRAMES
SAME AS "B" FOR OTHER FRAMES



DETAIL 1
SCALE: 3" = 1'-0"

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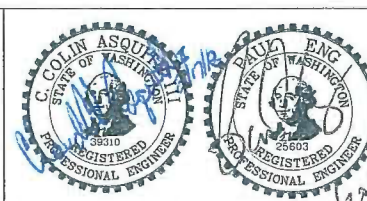
1-800-424-5555
UNDERGROUND SERVICE (USA)



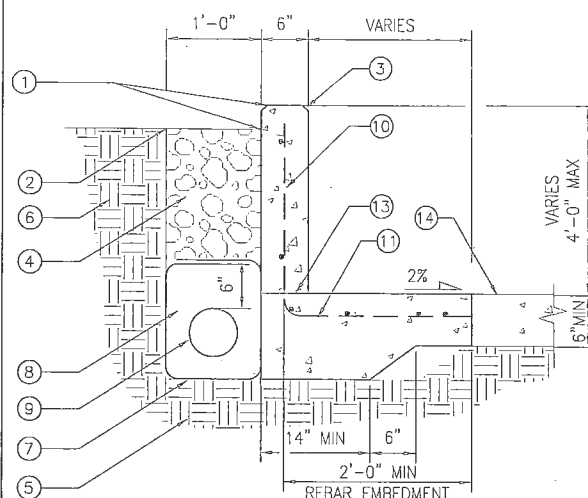
METRO TRANSIT DIVISION
RAPIDRIDE PROGRAM - C, D AND E LINES
PASSENGER FACILITIES IMPROVEMENTS
STANDARD SHELTER
FOOTING PLANS, SECTIONS
AND DETAILS

DATE:
FEB 2012
DRAWING NO:
D103
SHEET NO: 8 OF 17

▲				
▲				
▲				
▲	LENGTH OF STEM WALLS	PE	3/12	
▲	ADDED ISOLATION JOINT	RB	PE	2/12
No.	REVISION	BY	APP'D	DATE

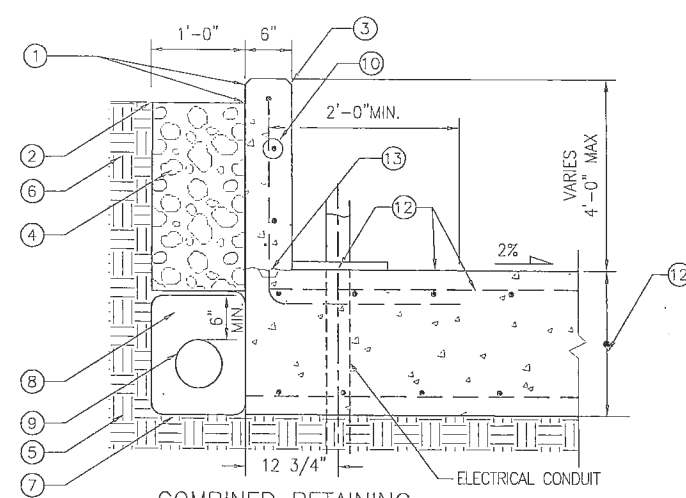


DESIGNED: PE/CA/AM L. KRENZEL	PROJECT MANAGER: L. KRENZEL	SCALE: AS NOTED
DRAWN: R. BULGER	APPROVED: L. PARIOT	SITE LOCATION NO:
CHECKED: P. ENG	IBIS NO:	ONE INCH AT FULL SIZE
RECOMMENDED: D. CRIPPEN	WORK REQUEST: CONTRACT NO:	IF NOT ONE INCH, SCALE ACCORDINGLY



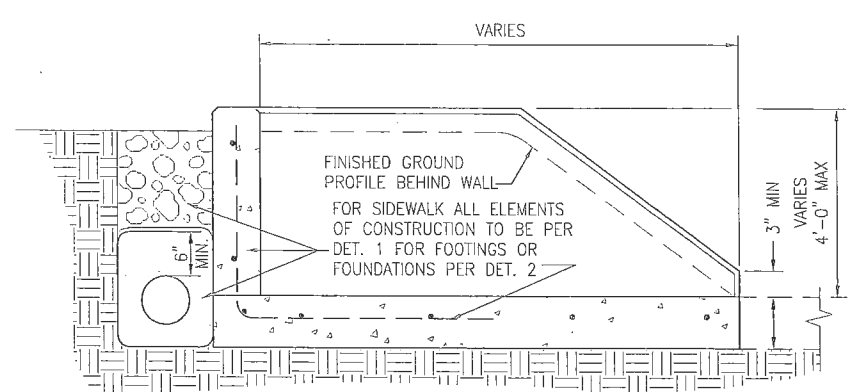
COMBINED RETAINING WALL- SIDEWALK

DETAIL
SCALE: NTS



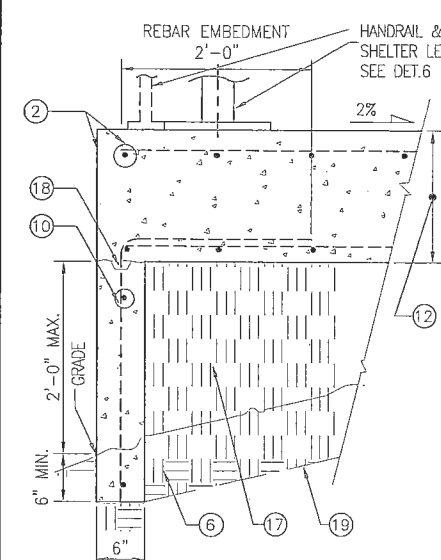
COMBINED RETAINING WALL- 2' SHELTER FOOTING

DETAIL
SCALE: NTS



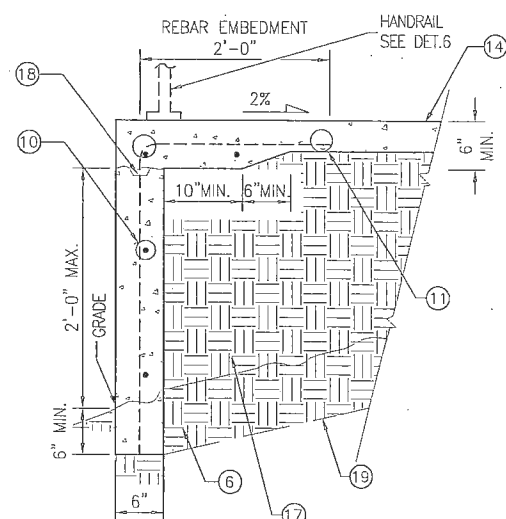
RETAINING WALL WITH WING WALL FOR COMBINATION FOOTINGS, FOUNDATIONS OR SIDEWALKS

DETAIL
SCALE: NTS



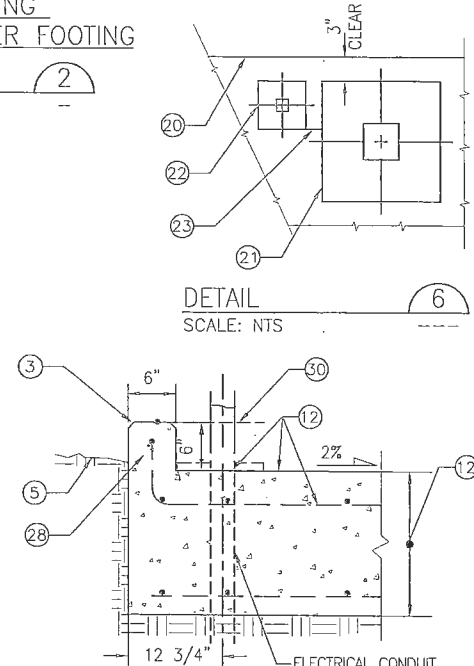
COMBINED FILL WALL- SHELTER FOOTING

DETAIL
SCALE: NTS



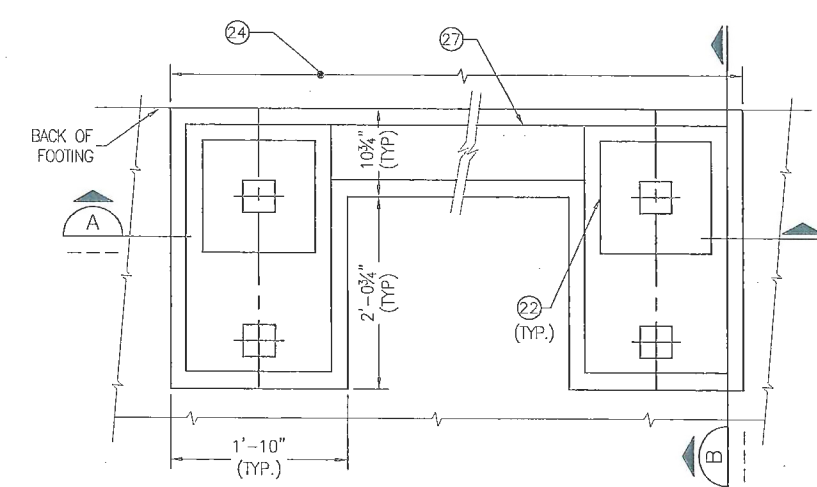
COMBINED FILL WALL-SIDEWALK

DETAIL
SCALE: NTS



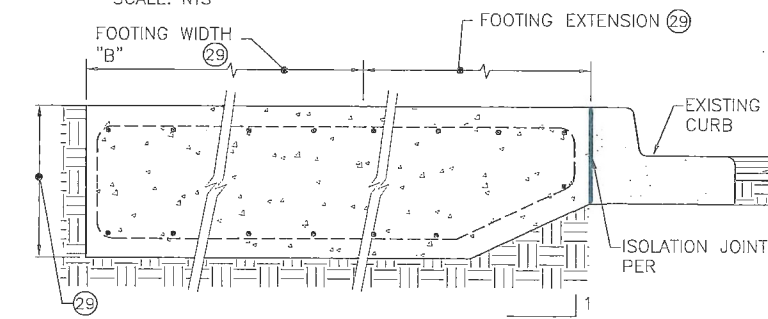
COMBINED 6" CURB AND FOOTING

DETAIL
SCALE: NTS

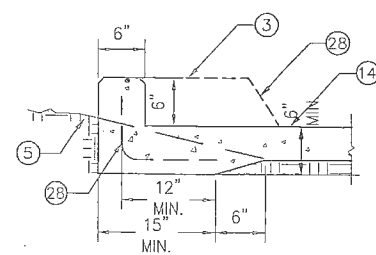


STUB WALL PLAN

DETAIL
SCALE: NTS

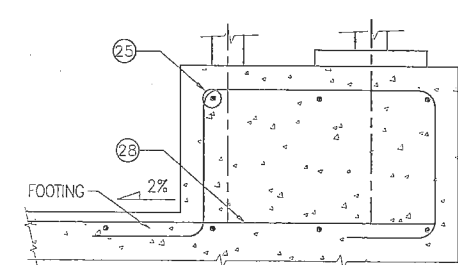


DETAIL
SCALE: NTS

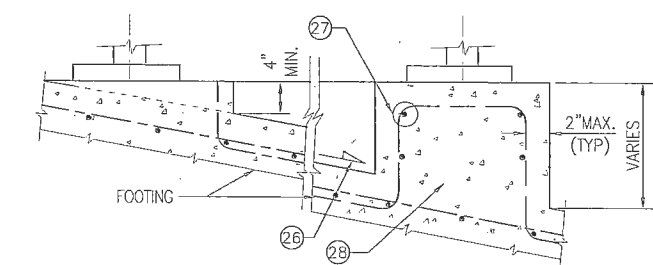


COMBINED 6" CURB AND SIDEWALK

DETAIL
SCALE: NTS



SECTION
SCALE: NTS



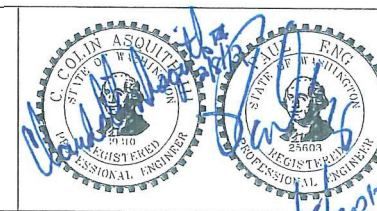
SECTION
SCALE: NTS

GENERAL NOTES

1. DRAIN PIPE NOT REQUIRED FOR WALLS 3 FEET HIGH OR LESS. SEE SITE PLANS FOR DAYLIGHTING DETAILS.
2. TOP OF WALLS TO MATCH THE LONGITUDINAL SLOPE OF FOOTINGS AND SIDEWALK.
3. TOP OF WALL 3" ABOVE FINISHED GRADE.
4. RESTORE SURFACE TO ORIGINAL OR BETTER CONDITION.
5. 3/4" CHAMFER FOR ALL EXPOSED EDGES.
6. 4" - 6" QUARRY SPALLS
7. UNDISTURBED SOIL
8. UNDISTURBED SOIL OR COMPACTED NATIVE SOIL OR STRUCTURAL FILL IF NEEDED.
9. FILTER FABRIC FOR WALLS HIGHER THAN 3'-0"
10. 1" MINUS WASHED ROCK
11. 4" SCH 40 PERFORATED PVC PIPE FOR WALLS HIGHER THAN 3'-0"
12. # 4 @ 12" OC E/W WITH 2" COVER. SEE 4/D106 FOR REBARS AT WALL CORNERS
13. # 4 @ 12" OC WITH 3" COVER
14. SEE SITE PLAN AND DWG D101 OR D103 FOR SHELTER FOOTING DETAILS. 12 3/4" FROM BACK OF SHELTER TO CENTERLINE OF ELECTRICAL CONDUIT.
15. ROUGHEN TOP SURFACE OF SLAB UNDER WALL, CLEAN AND COAT WITH CONCRETE EPOXY BONDING COMPOUND, OR PROVIDE A 1" DEEP BY 4" WIDE CONTINUOUS KEYWAY.
16. NEW SIDEWALK OR SIDEWALK EXTENSION PER CITY STANDARD DETAIL BEYOND THE THICKENED EDGE SHOWN.
17. SEE DETAIL 1 FOR SIDEWALK OR 2 FOR SHELTER FOOTING
18. FINISHED GROUND PROFILE BEHIND WING WALL
19. STRUCTURAL FILL COMPACTED TO 90% OF PROCTOR
20. ROUGHEN TOP SURFACE OF WALL UNDER SLAB, CLEAN AND COAT WITH CONCRETE EPOXY BONDING COMPOUND, OR PROVIDE A 1" DEEP BY 4" WIDE CONTINUOUS KEYWAY.
21. TAPER SIDEWALL TO EDGE OF FOOTING OR SIDEWALK EXTENSION.
22. BACK EDGE OF FILL WALL
23. TYPICAL 13" X 13" SHELTER REAR LEG SHOE PLATE (BY OTHERS). PLACE REBARS AS NECESSARY TO AVOID INTERFERENCE WITH ANCHORS. SEE DET 1/D101 FOR BOLT PATTERN.
24. TYPICAL HANDRAIL POST BASE PLATE. PLACE REBARS AS NECESSARY TO AVOID INTERFERENCE WITH ANCHORS. SEE DET 3/D107 FOR BOLT PATTERN.
25. 2" CLEARANCE AT EITHER SIDE OF SHELTER REAR LEG SHOE PLATE
26. 8'-4 1/2" FOR SHELTERS RR-125 AND RR-126, 14'-0 1/2" FOR LARGE SHELTERS.
27. NOT USED
28. 5% SLOPE OR MORE
29. REINFORCEMENT SAME AS FOOTING, # 5 @ 12" MAX EW. PLACE AS NECESSARY TO AVOID INTERFERENCE WITH SHOE PLATE ANCHORS. SEE DET 1/D101 FOR BOLT PATTERN.
30. IF THE WALL OR CURB IS NOT CONSTRUCTED MONOLITHICALLY WITH THE FOOTING OR SIDEWALK ROUGHEN THE FOOTING OR SIDEWALK SURFACE, CLEAN AND COAT WITH CONCRETE EPOXY BONDING AGENT PRIOR TO PLACING THE WALL OR CURB.
31. DIMENSIONS VARY. SEE ZONE PLAN FOR FOOTING TYPE AND EXTENSION LENGTH AND DWG D101 OR D103 FOR OTHER FOOTING DETAILS.
32. WHEN CALLED FOR ON THE SITE PLAN CONSTRUCT SIDE CURB WITH TAPERED ENDS AT SIDES OF EITHER THE FOOTING OR THE SIDEWALK.
33. TAPER SIDEWALL TO NEW FINISHED GRADE AT BOTH SIDES OF THE SIDEWALK
34. SEE 6/D105

CONSTRUCTION NOTES

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1-800-424-5555
UNDERGROUND SERVICE (USA)

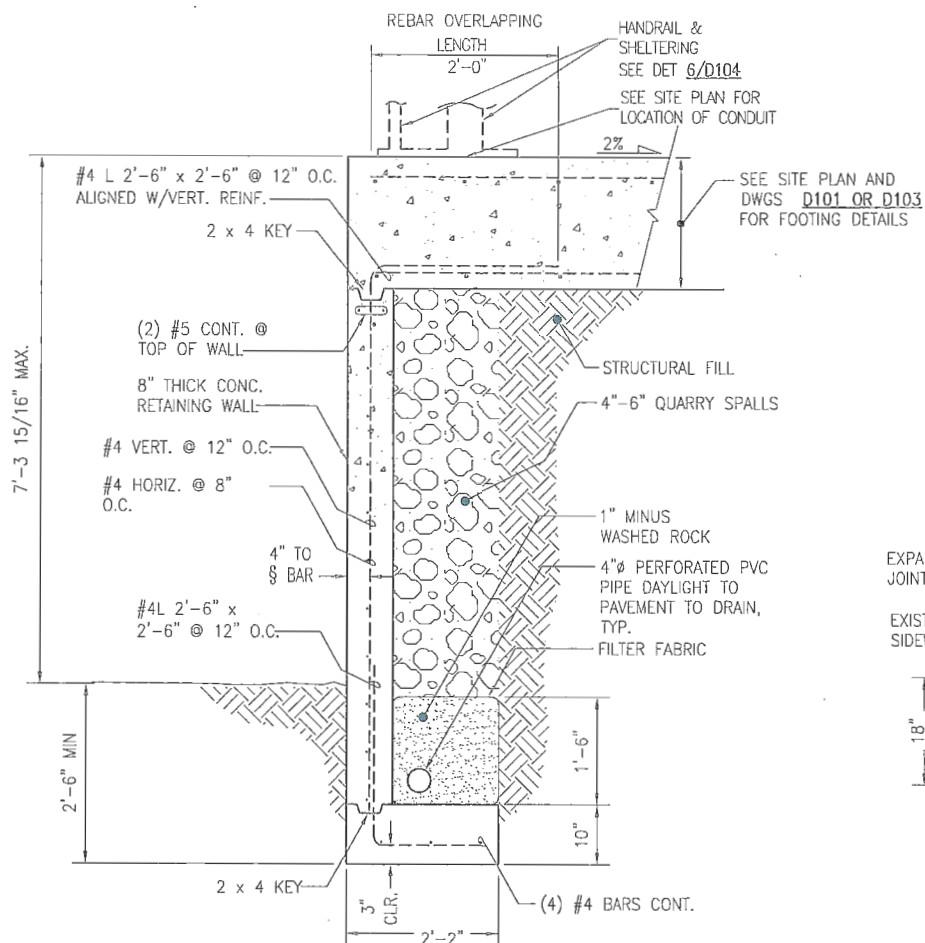


DESIGNED: PE/CA/AM	PROJECT MANAGER: L. KRENZEL	SCALE: AS NOTED
DRAWN: R. BULGER	APPROVED: L. PARROT	SITE LOCATION NO:
CHECKED: P ENG	1615 NO:	ONE INCH AT FULL SIZE
RECOMMENDED: D CRIPPEN	CONTRACT NO: C00635C11	IF NOT ONE INCH, SCALE ACCORDINGLY

	METRO TRANSIT DIVISION RAPIDRIDE PROGRAM - C, D AND E LINES PASSENGER FACILITIES IMPROVEMENTS		DATE: DEC 2011
	SECTIONS AND DETAILS		DRAWING NO: D104
			SHEET NO: 9 OF 17

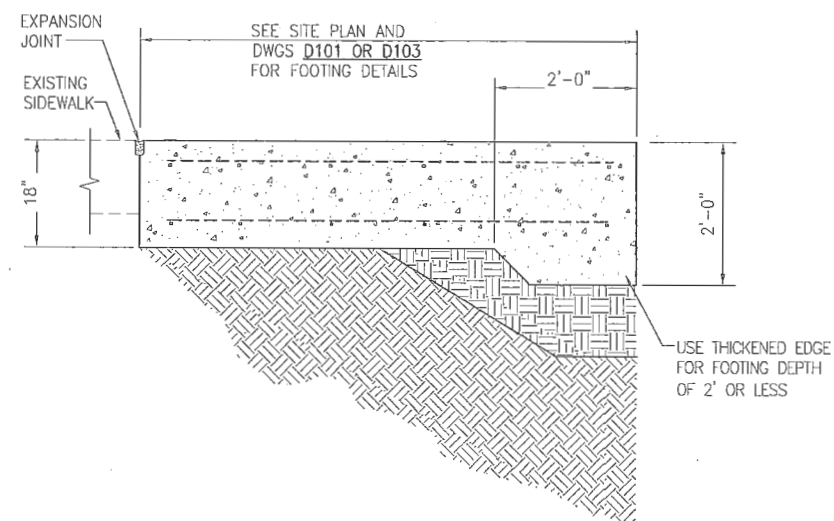
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PLOTED: Dec 13, 2011 - 10:22:44am By: Bulger
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IMAGES:

No.	REVISION	BY	APP'D	DATE
1	REBAR LAYOUT DETAILS	RB	PE	12/11



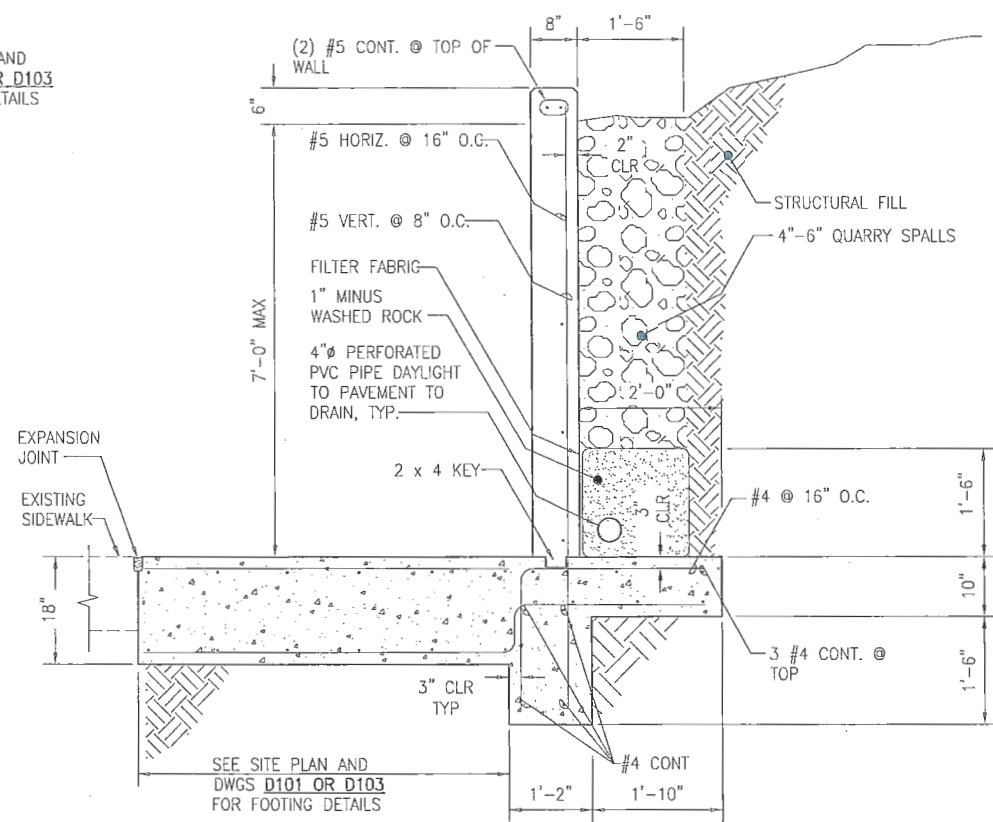
COUNTERFORT WALL
WITH INTEGRATED SHELTER FOOTING

DETAIL 1
SCALE: NTS



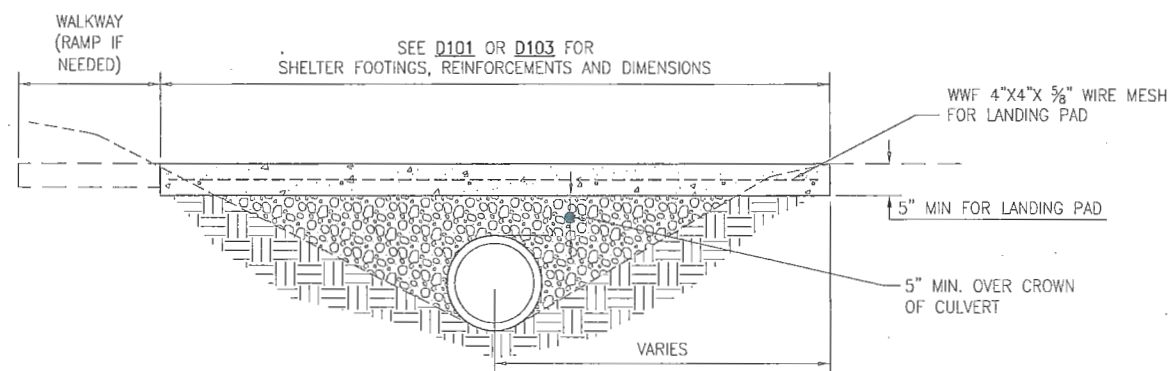
FOOTING W/THICKENED EDGE

DETAIL 3
SCALE: NTS



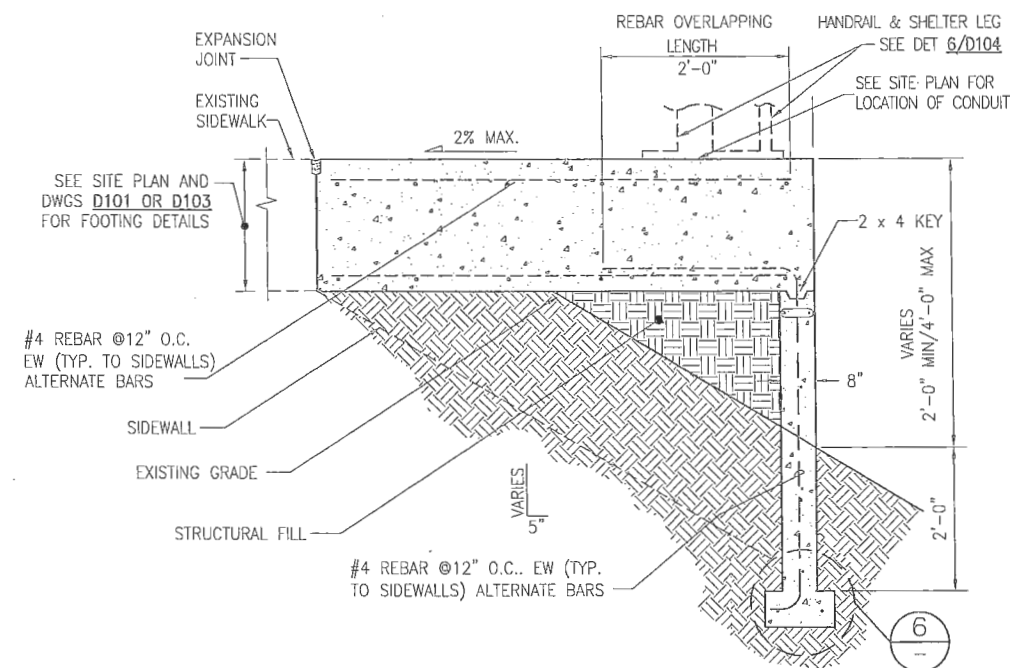
COUNTERFORT WALL
WITH INTEGRATED SHELTER FOOTING

DETAIL 2
SCALE: NTS



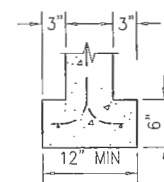
REINFORCED SLAB/SHELTER FOOTING

DETAIL 5
SCALE: 1"=1'-0"



COMBINED OVER 2' HIGH
FILL WALL-FOOTING/FOUNDATION

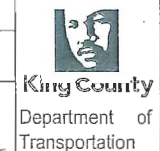
DETAIL 4
SCALE: NTS



DETAIL 6
SCALE: 1 1/2"=1'-0"

Call
before you
Dig.

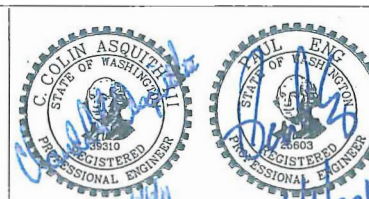
1-800-424-5555
UNDERGROUND SERVICE (USA)



METRO TRANSIT DIVISION
RAPIDRIDE PROGRAM - C, D AND E LINES
PASSENGER FACILITIES IMPROVEMENTS

DETAILS

DATE:
JUNE 2011
DRAWING NO:
D105
SHEET NO: 8 OF 15

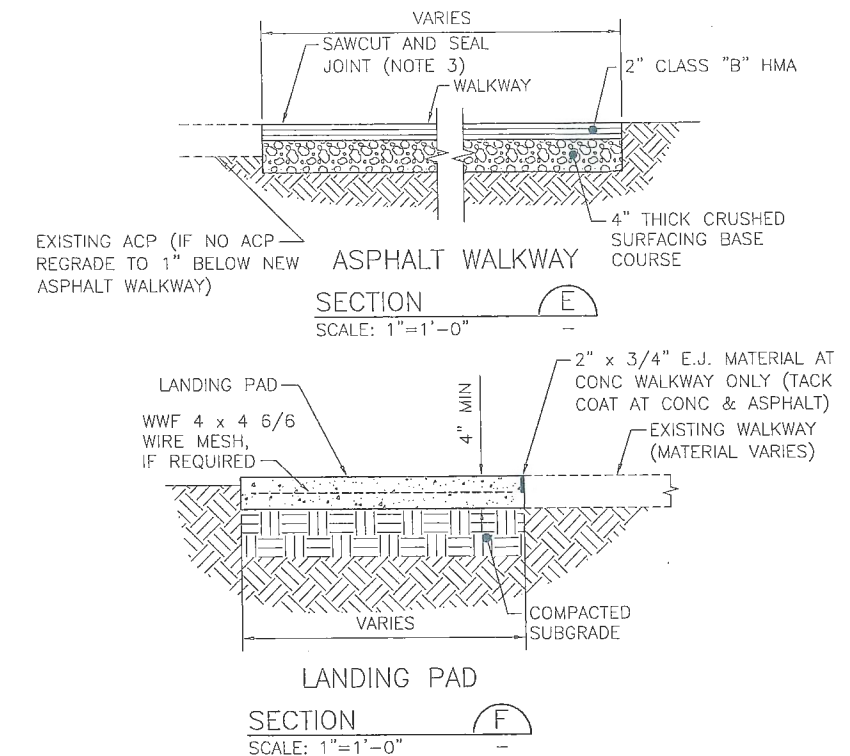
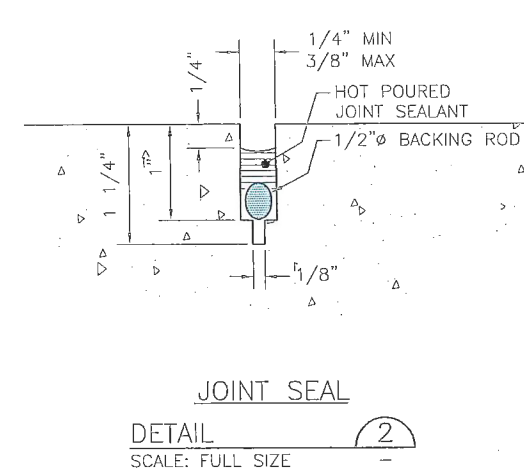
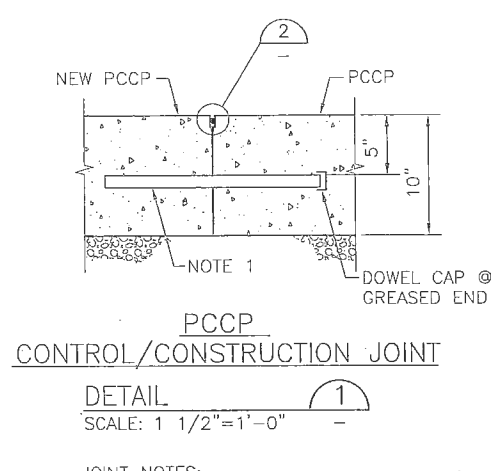
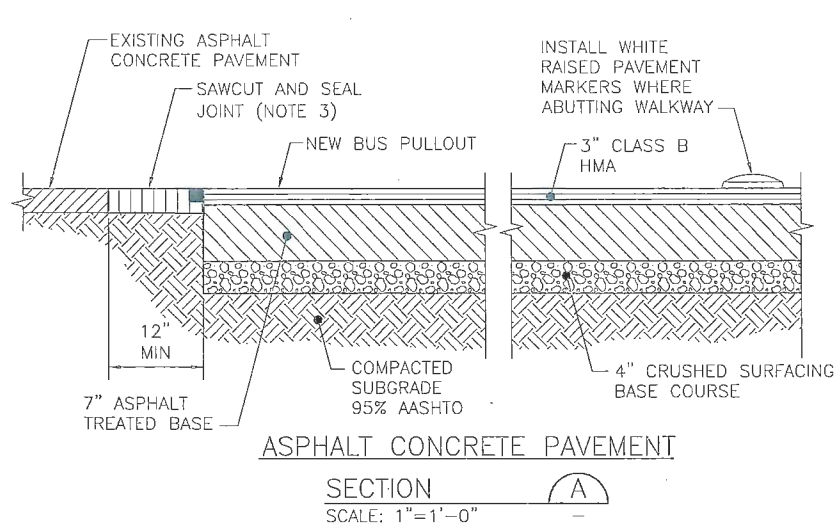


DESIGNED:
PE/CA/AM
DRAWN:
R. BULGER
CHECKED:
P. ENG
RECOMMENDED:
D. CRIPPE

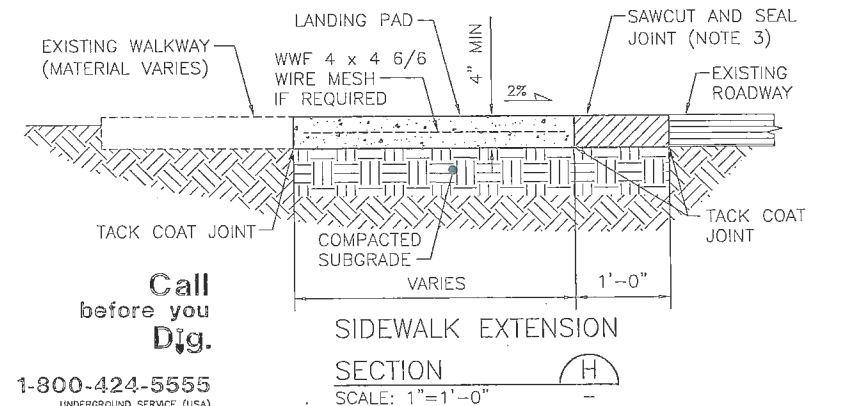
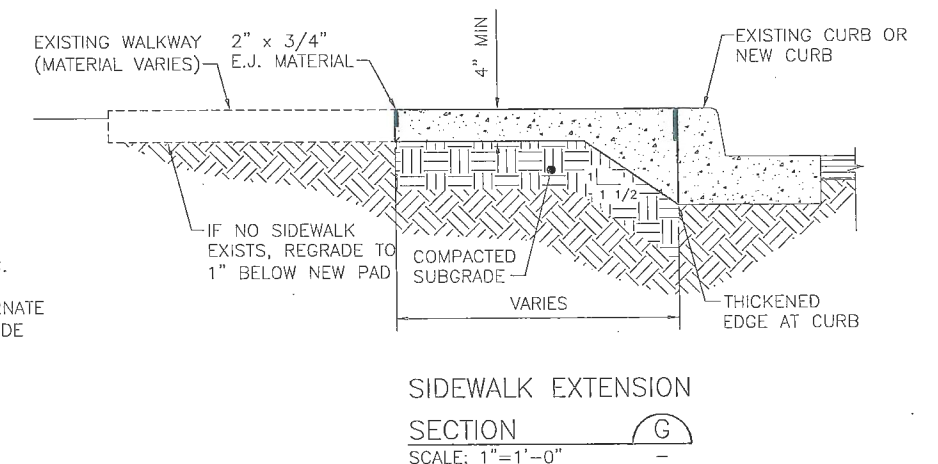
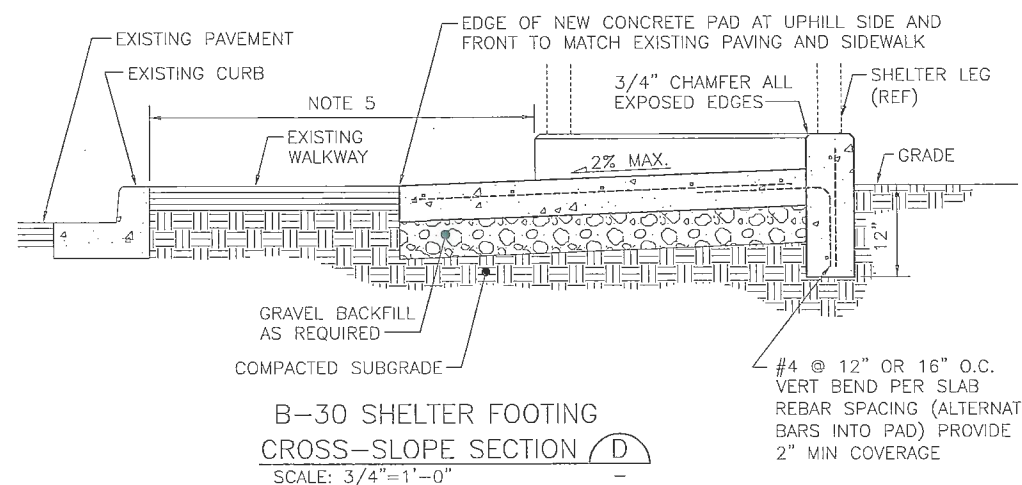
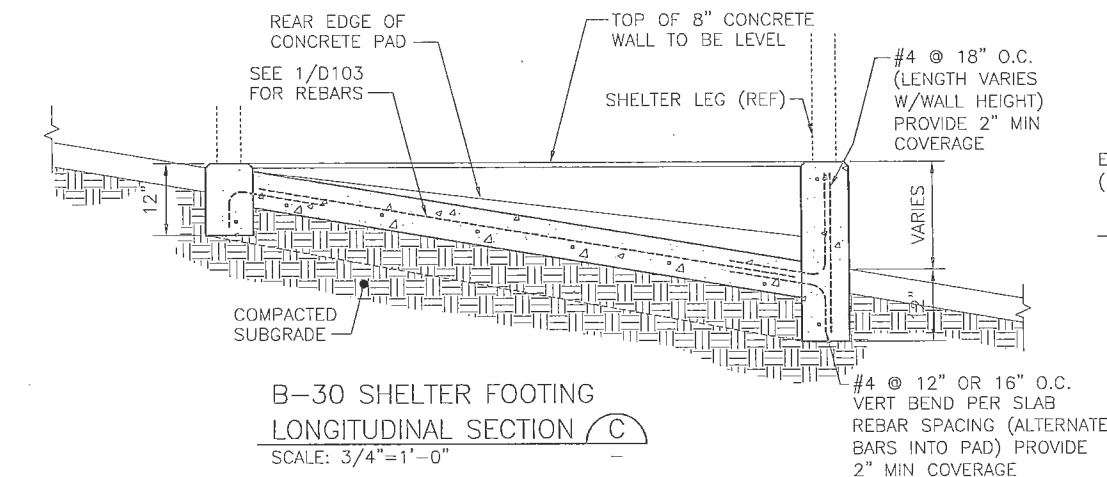
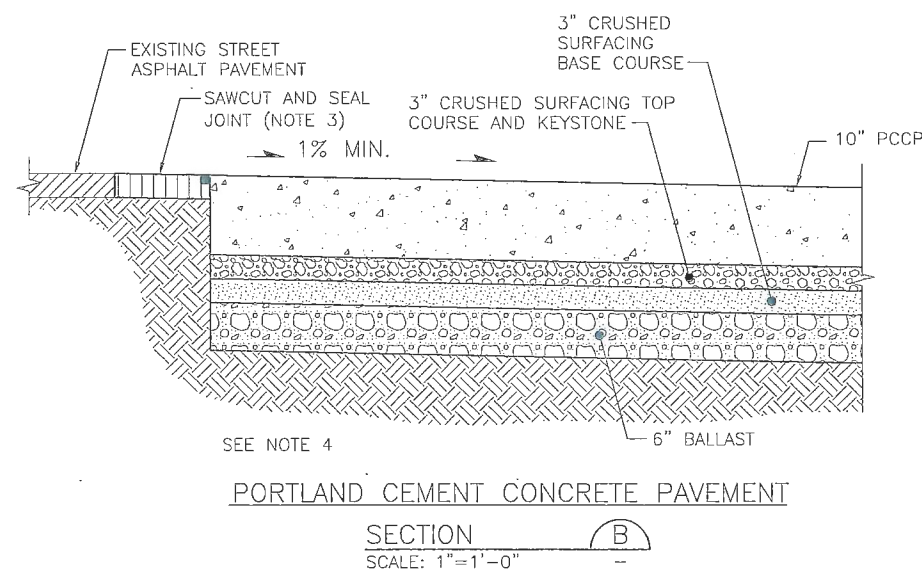
PROJECT MANAGER:
L. KRENZEL
APPROVED:
L. PARRIOT
IBIS NO:
WORK REQUEST:
CONTRACT NO:
C00635C11

SCALE:
AS NOTED
SITE LOCATION NO:
ONE INCH AT FULL
SIZE
IF NOT ONE INCH, SCALE
ACCORDINGLY

No.	REVISION	BY	APP'D	DATE



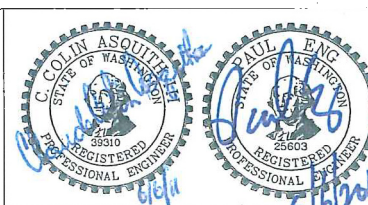
- NOTES:**
1. NEW PULLOUTS, WALKWAYS, AND LANDING PADS SHALL BE BUILT TO MATCH WITH EXISTING SURFACE TO MAINTAIN NATURAL DRAINAGE COURSES. WALKWAY AND LANDING PAD CROSS SLOPES SHALL MEET OR EXCEED "ADA" REQUIREMENTS, i.e. 2% MAX SLOPE. TYPICAL PASSENGER LANDING PAD DIMENSIONS: 10' WIDE AND 8' (MIN) 9' (PREFERRED) DEEP.
 2. ALL DEPTHS SHOWN ARE COMPACTED DEPTHS.
 3. SAWCUT AND REMOVE SECTION OF EXISTING PAVEMENT UPON COMPLETION OF BUS PULLOUT. RESTORE ASPHALT PAVEMENT TO MATCH EXISTING. JOINT SHALL BE 1/2" WIDE X 5/8" DEEP. FILL JOINT WITH SILICONE JOINT FILLER.
 4. TRANSVERSE CONTROL/CONSTRUCTION JOINT SHALL BE PLACED TO MATCH CURB JOINTS OR 12'-0" O.C. MAX, WHICHEVER IS LESS. SEE 1/- & 2/- FOR PCCP TRANSVERSE/EXPANSION JOINT DETAILS.
 5. MINIMUM HORIZONTAL CLEARANCE BETWEEN FACE OF CURB AND FACE OF ANY STRUCTURE SHALL BE 3 FT.



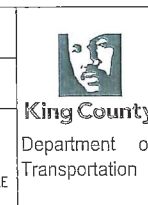
Call before you Dig.
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SECTION H: Sidewalk Extension
SCALE: 1"=1'-0"

No.	REVISION	BY	APP'D	DATE
1				
2				
3				
4				
5				

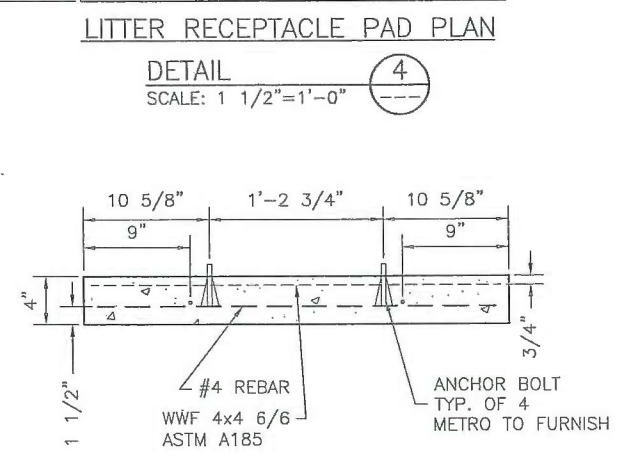
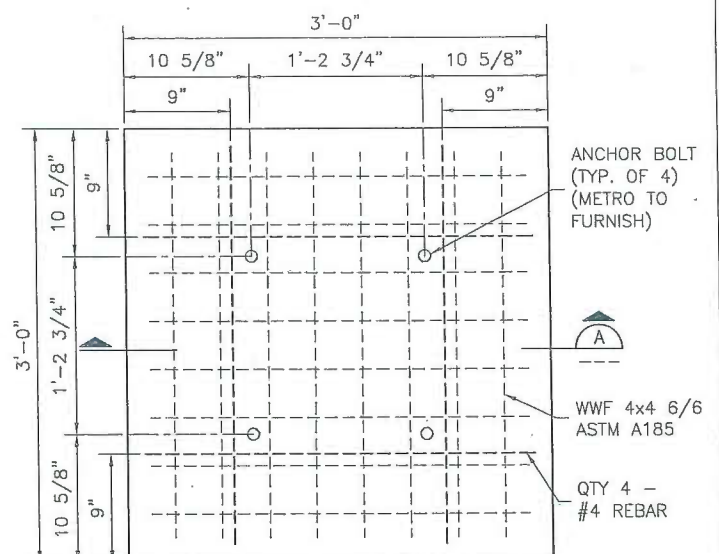
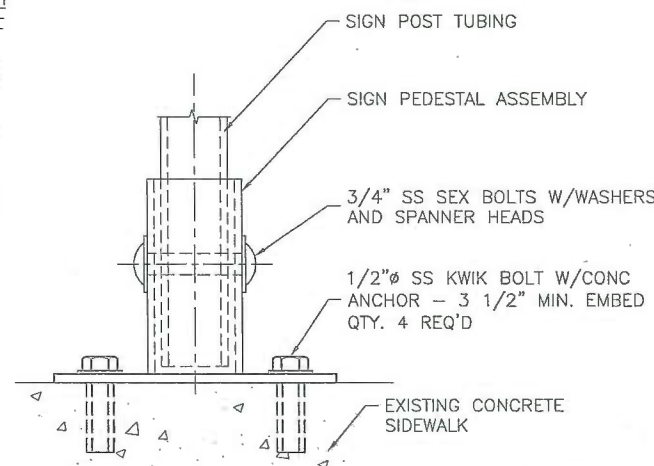
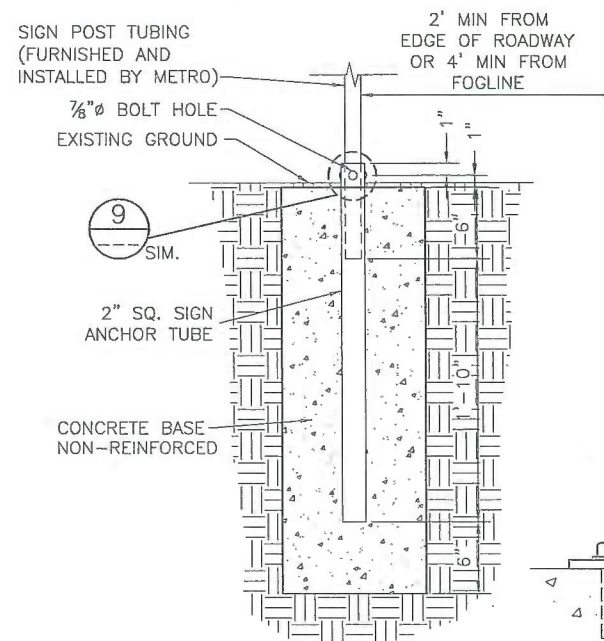
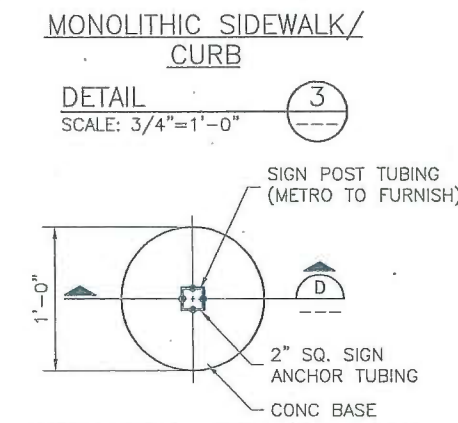
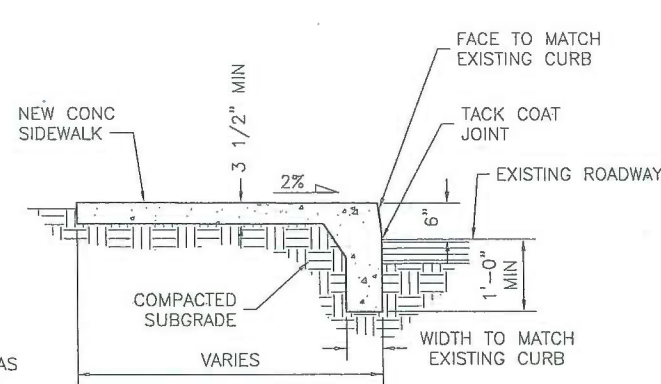
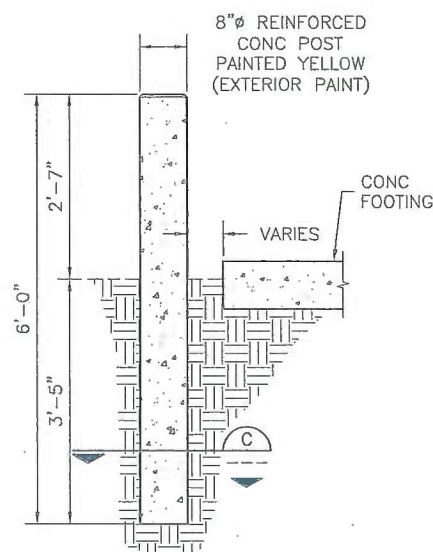
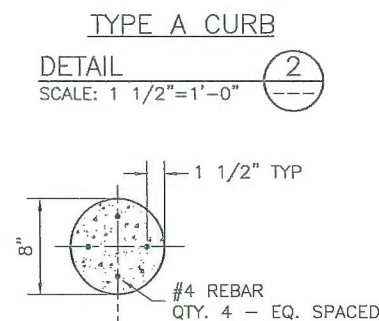
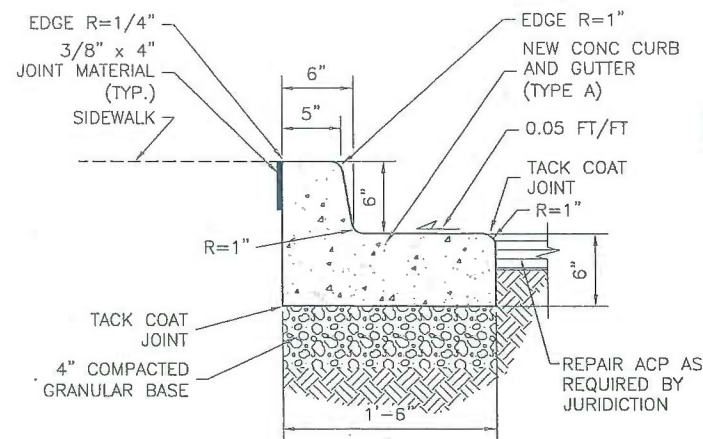
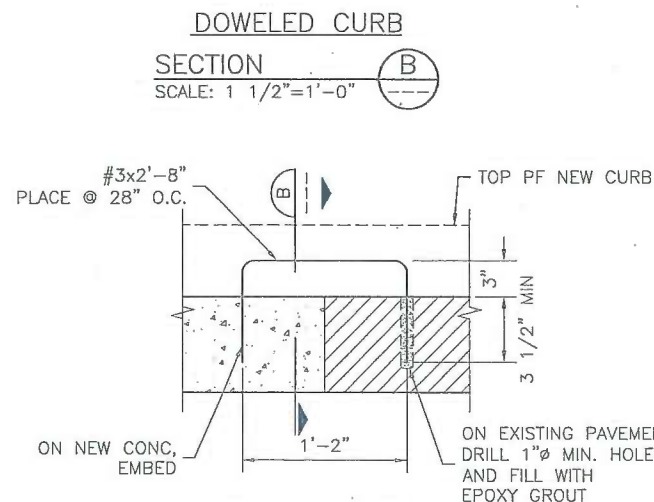
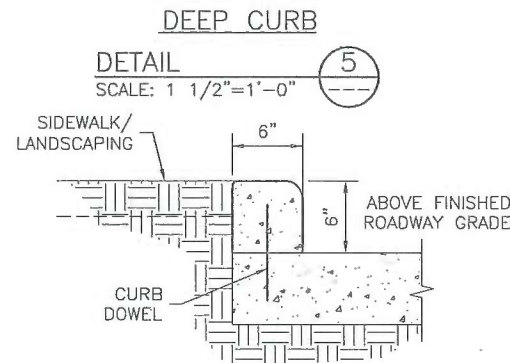
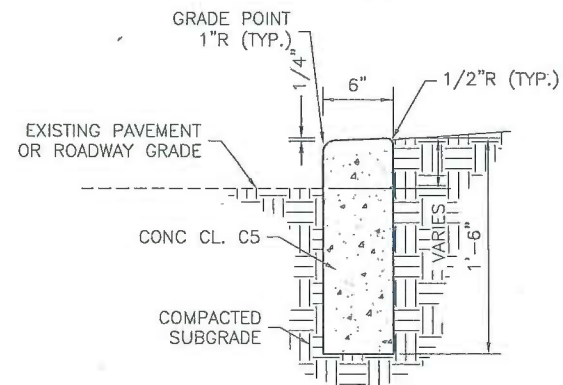
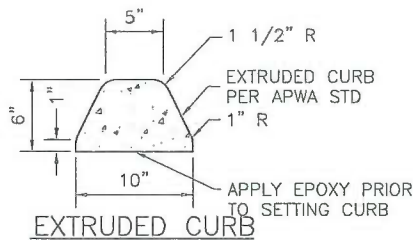


DESIGNED: PE/CA/AM L. KRENZEL	PROJECT MANAGER: L. KRENZEL	SCALE: AS NOTED SITE LOCATION NO:
DRAWN: R. BULGER	APPROVED: L. PARRIOT	ONE INCH AT FULL SIZE IF NOT ONE INCH, SCALE ACCORDINGLY
CHECKED: P. ENG D. CRIPPE	IBS NO: WORK REQUEST: CONTRACT NO: C00635C11	



METRO TRANSIT DIVISION
RAPIDRIDE PROGRAM - C, D AND E LINES
PASSENGER FACILITIES IMPROVEMENTS
**PAVEMENT, LANDING PAD,
FOOTING SECTIONS
& DETAILS**

DATE: JUNE 2011
DRAWING NO: D108
SHEET NO: 11 OF 15



LITTER RECEPTACLE PAD

LITTER RECEPTACLE PAD NOTES

1. SAWCUT ASPHALT PAVEMENT, AS REQUIRED, FOR THE CONCRETE PAD.
2. CONCRETE PAD TO BE CAST IN PLACE.
3. CONCRETE PAD TO BE INSTALLED LEVEL AND PARALLEL WITH THE SHELTER FOOTING OR LANDING PAD.

SIGN POLE NOTES

1. CONCRETE MIX TO BE CLASS C-5.
2. METRO WILL PROVIDE NEW ANCHOR TUBING AND DRIVE RIVETS.
3. RESTORE AREA TO ORIGINAL CONDITION.
4. INSTALLATION DETAILS FOR RELOCATION OF STREET SIGNS AND SIGNS OTHER THAN BUS. SIGNS SHALL MATCH THE EXISTING INSTALLATION AND STANDARDS.

No.	REVISION	BY	APP'D	DATE



DESIGNED: PE/CA/AM R. BULGER	PROJECT MANAGER: L. KRENZEL	SCALE: AS NOTED
CHECKED: P. ENG D. CRIPPER	APPROVED: L. PARRIOT	SITE LOCATION NO: ONE INCH AT FULL SIZE
RECOMMENDED: D. CRIPPER	WORK REQUEST: CONTRACT NO: C00635C11	IF NOT ONE INCH, SCALE ACCORDINGLY

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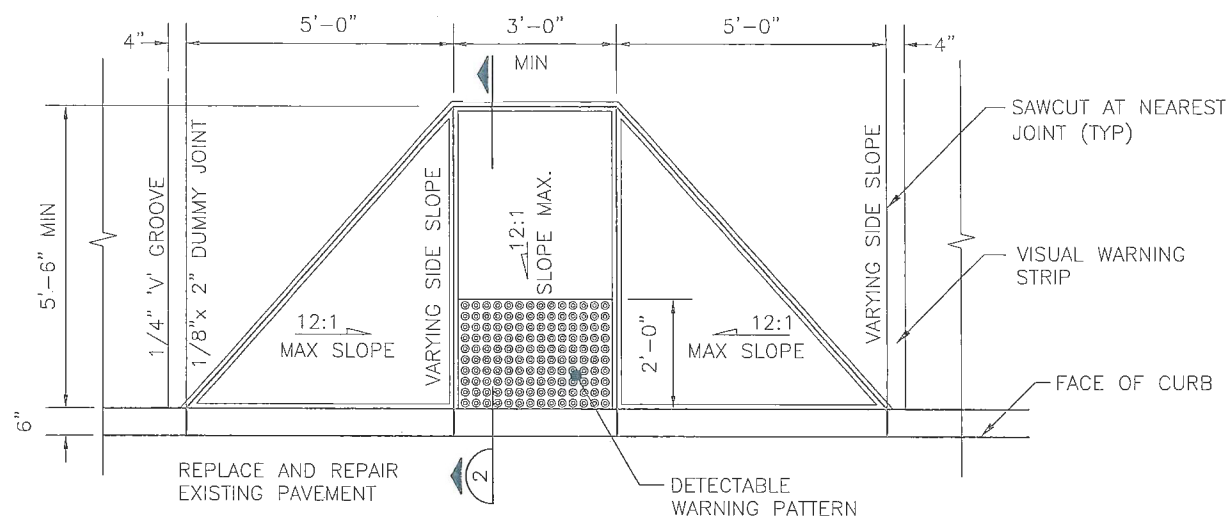
1-800-424-5555



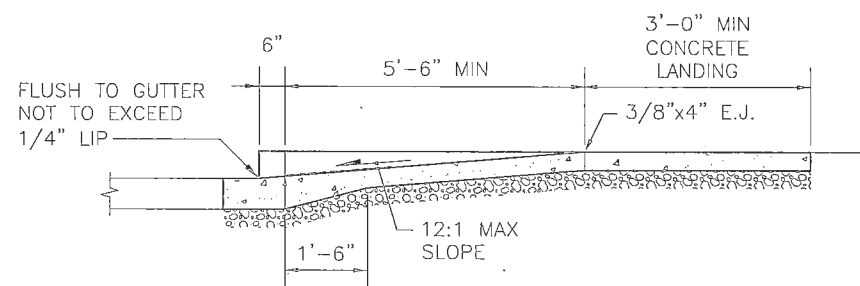
METRO TRANSIT DIVISION
RAPIDRIDE PROGRAM - C, D AND E LINES
PASSENGER FACILITIES IMPROVEMENTS

SECTIONS AND DETAILS

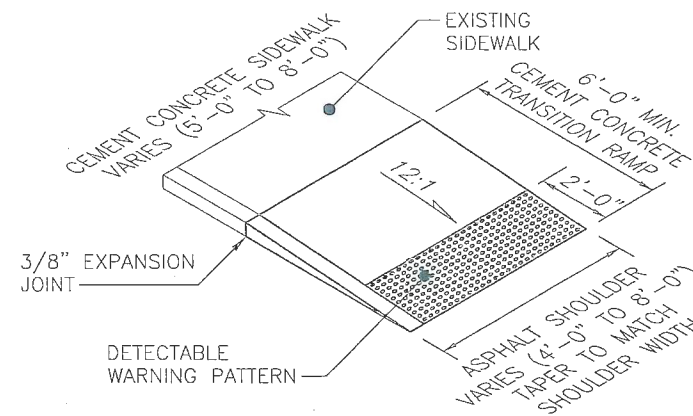
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DRAWING NO: D109
SHEET NO. OF 12 OF 15



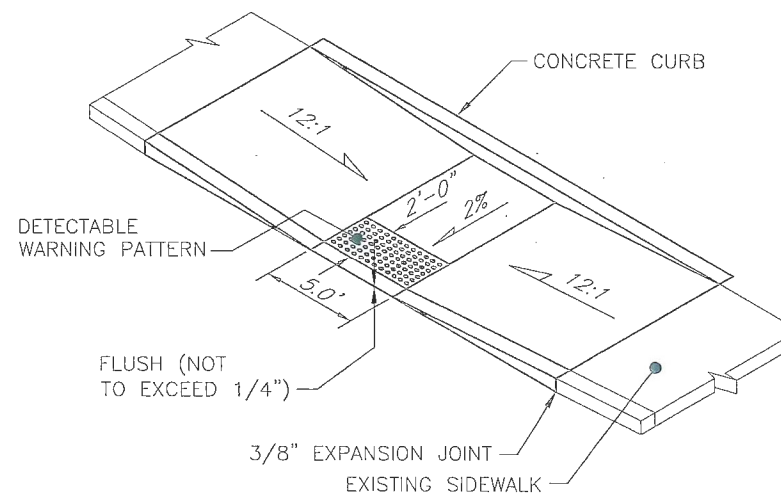
PLAN
SCALE: 1/2"=1'-0"



PERPENDICULAR CURB RAMP
SECTION
SCALE: 1/2"=1'-0"



TRANSITION CURB RAMP
DETAIL
SCALE: NONE



PARALLEL CURB RAMP
DETAIL
SCALE: NONE

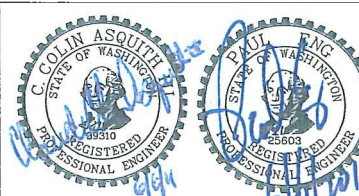
NOTES:

1. RAMP AND APPROACHES SHALL BE CLEAR OF OBSTACLES INCLUDING HYDRANTS, POLES, AND INLETS.
2. RAMP SHALL HAVE DETECTABLE WARNING SURFACE PER WSDOT STANDARD PLAN F_45.10.00.
3. RAMP C SHALL BE PERPENDICULAR TO OR RADIAL TO CURB RETURNS UNLESS OTHERWISE APPROVED BY THE PROJECT REPRESENTATIVE.
4. WHERE REQUIRED BY CITY OR COUNTY STANDARDS, 4" WIDE VISUAL WARNING STRIP SHALL BE PROVIDED BETWEEN EXPANSION AND SCORED (CONTRACTION) JOINTS.
5. REMOVAL OF EXISTING CURB RAMPS OR SIDEWALK FOR CONSTRUCTION OF NEW CURB RAMPS SHALL BE TO THE NEAREST JOINT. SAWCUT AT EXPANSION JOINT AS REQUIRED. REMOVE SIDEWALK AND CURB AND GUTTER AS REQUIRED TO OBTAIN ADEQUATE SPACING FOR NEW CURB RAMP TRANSITION AND WARNING STRIP(WHERE REQUIRED).
6. WHEN RAMPS ARE CONSTRUCTED ON ONE SIDE OF THE STREET, RAMPS SHALL BE CONSTRUCTED AT CORRESPONDING SIDEWALK LOCATIONS ON OPPOSITE SIDE OF STREET.
7. CURB RAMP LOCATION AND CONSTRUCTION ON ARTERIAL AND RESIDENTIAL STREETS SHALL BE IN ACCORDANCE WITH THE STANDARDS OF THE CITY OR COUNTY IN WHICH CONSTRUCTION IS TO BE DONE.

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UNDERGROUND SERVICE (USA)

No.	REVISION	BY	APP'D	DATE



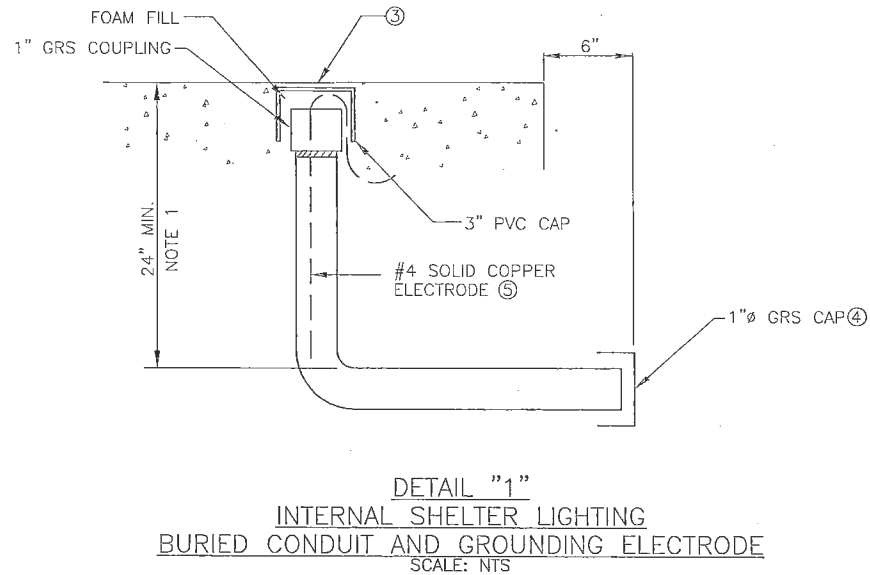
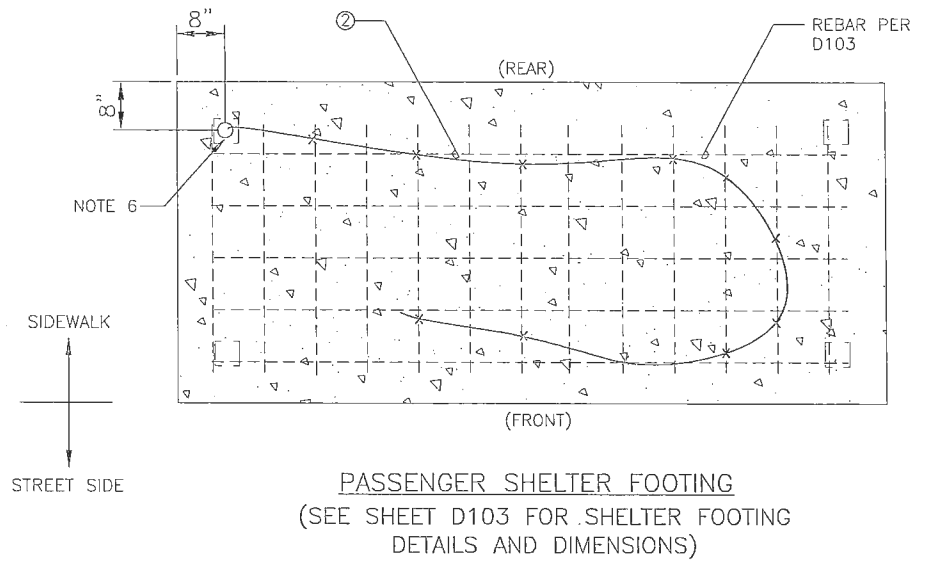
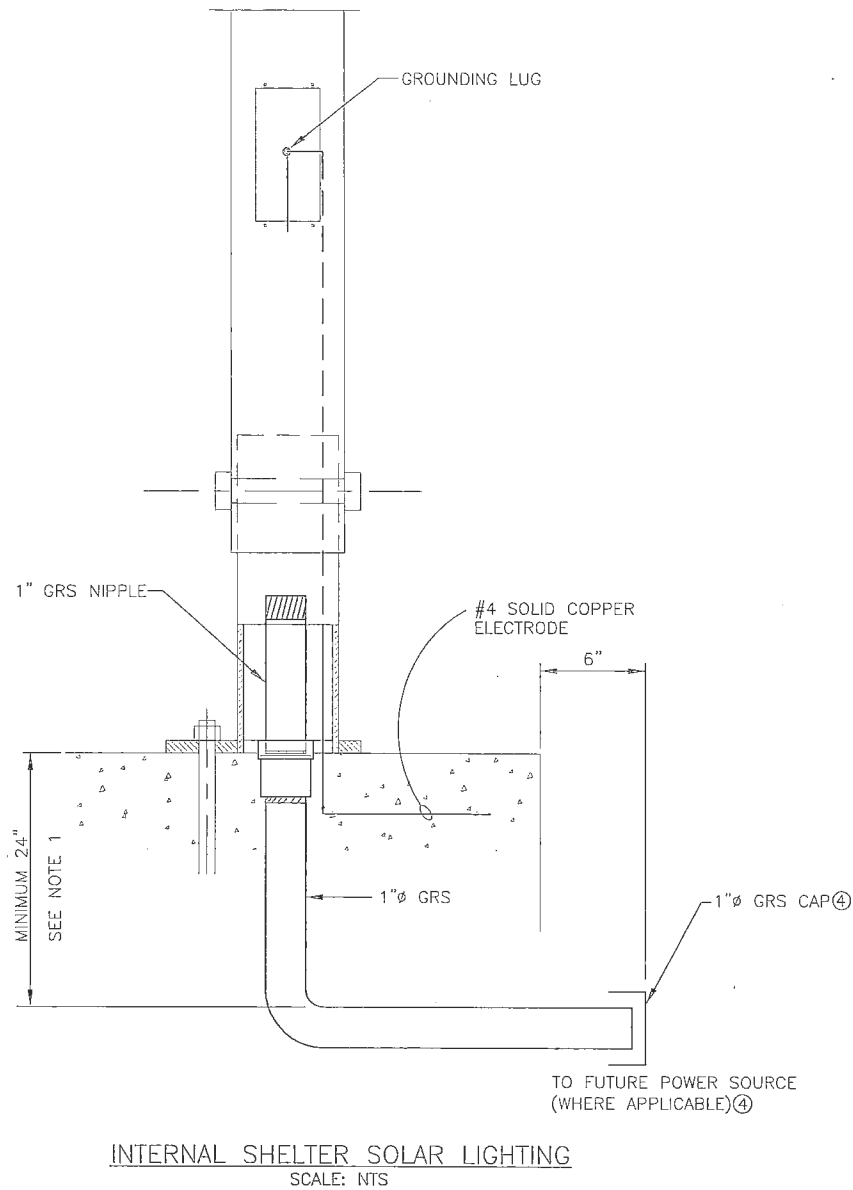
DESIGNED: PE/CA/AM R. BULGER	PROJECT MANAGER: L. KRENZEL	SCALE: AS NOTED
CHECKED: P. ENG	APPROVED: L. PARRIOT	SITE LOCATION NO:
RECOMMENDED: D. CRIPPER	IBIS NO:	ONE INCH AT FULL SIZE
	WORK REQUEST:	1"
	CONTRACT NO:	IF NOT ONE INCH, SCALE ACCORDINGLY



METRO TRANSIT DIVISION
RAPIDRIDE PROGRAM - C, D AND E LINES
PASSENGER FACILITIES IMPROVEMENTS
CURB RAMP
CONSTRUCTION DETAILS

DATE: JUNE 2011
DRAWING NO: D110
SHEET NO: 13 OF 15

V:\Library & Standards\Working Documents\PPM\metro\PPF - C and D Lines\0111.dwg | Layout: D111
PLOTED: 06/01/2011 11:20:17 AM By: Eudger
XREFS: C:\22\34_RR C & D ELECTRICAL.dwg
IMAGES:



GENERAL NOTES:

1. THIS CONDUIT/GROUNDING ELECTRODE DESIGN IS FOR BUS STOPS WHERE HARD-WIRE ELECTRICAL CONNECTION IS NOT READILY AVAILABLE. IT ALLOWS FOR FUTURE HARD-WIRE CONNECTION FOR 110V SHELTER LIGHTING AND/OR GROUNDING FOR A SOLAR SHELTER LIGHTING SYSTEM.

CONSTRUCTION NOTES: ○

1. CONDUIT SHALL BE INSTALLED 24" BELOW FINISHED GRADE.
2. FOR SHELTER GROUNDING, TIE 23 FEET OF #4 SOLID COPPER GROUNDING ELECTRODE TO THE SHELTER FOUNDATION REBARS WITH TIE WIRES. LEAVE 2 FEET AT THE OTHER END FOR ATTACHMENT TO THE GROUNDING LUG ON THE SHELTER LEG. SEE DETAIL "1" AND NOTE 3 BELOW.
3. PLACE THE 2 FT #4 COPPER ELECTRODE INTO THE 1" DIA GRS CONDUIT AS SHOWN IN DETAIL "1". SECURE 1" GRS COUPLING IN PLACE. SEAL THE GRS CONDUIT/COUPLING WITH DUCT TAPE. CAP THE ASSEMBLY WITH A 3" PVC CAP AND FILL VOID WITH SPRAY-ON FOAM. TOP OF PVC CAP SHALL BE 1/4" BELOW THE FINISHED CONCRETE GRADE.
4. IF NO SPECIFIED CONNECTION TO A POWER SOURCE, THE 1" GRS CONDUIT SHALL BE EXTENDED 6 INCHES BEYOND THE EDGE OF SHELTER FOUNDATION AND CAPPED.
5. THE #4 SOLID COPPER GROUND ELECTRODE SHALL BE ENCLOSED BY AT LEAST 2" OF CONCRETE IN ACCORDANCE WITH NEC 250.52 (A) (3).
6. FOR STANDARD METRO SHELTERS, ELECTRICAL LEG SHALL BE AT THE REAR RIGHT CORNER. FOR RAPID RIDE SHELTERS, ELECTRICAL LEG SHALL BE AT THE REAR LEFT CORNER. (LOOKING INTO SHELTER FROM STREET SIDE.)
7. (INFORMATION FOR METRO'S SHELTER CREW: PRIOR TO INSTALLING SHELTER WITH A SOLAR LIGHTING SYSTEM, CHIP AWAY THE 1/4" CONCRETE COVER AND REMOVE THE 3" PVC CAP. PULL OUT THE #4 COPPER ELECTRODE. CONNECT THE ELECTRODE TO THE SHELTER LEG VIA A GROUNDING LUG. SEAL THE 1" DIA GRS WITH A WATER-TIGHT PLUG FOR FUTURE USE.)

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before you
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UNDERGROUND SERVICE (USA)



DESIGNED: C. REYNOLDS
DRAWN: L. KRENZEL
CHECKED: W. AYCOCK
RECOMMENDED: D. CRIPPS
PROJECT MANAGER: L. KRENZEL
APPROVED: L. PARROT
WORK REQUEST: CONTRACT NO: C00635C11

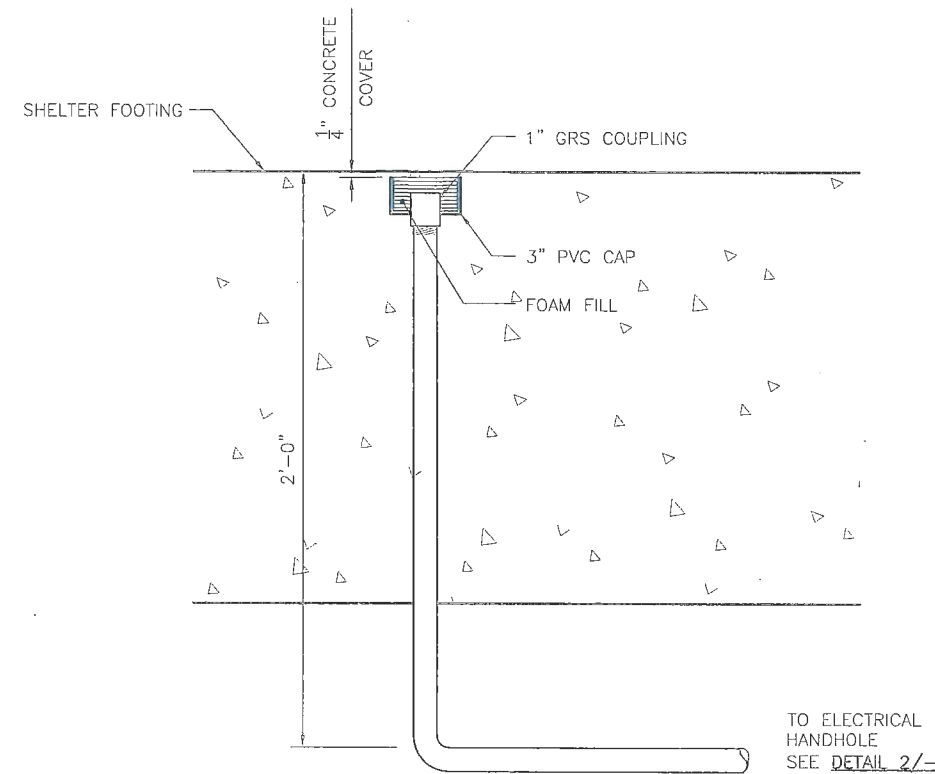
SCALE: AS NOTED
SITE LOCATION NO:
ONE INCH AT FULL SIZE
IF NOT ONE INCH, SCALE ACCORDINGLY



METRO TRANSIT DIVISION
RAPIDRIDE PROGRAM - C, D AND E LINES
PASSENGER FACILITIES IMPROVEMENTS
INTERNAL SOLAR
SHELTER LIGHTING
ELECTRICAL DETAILS

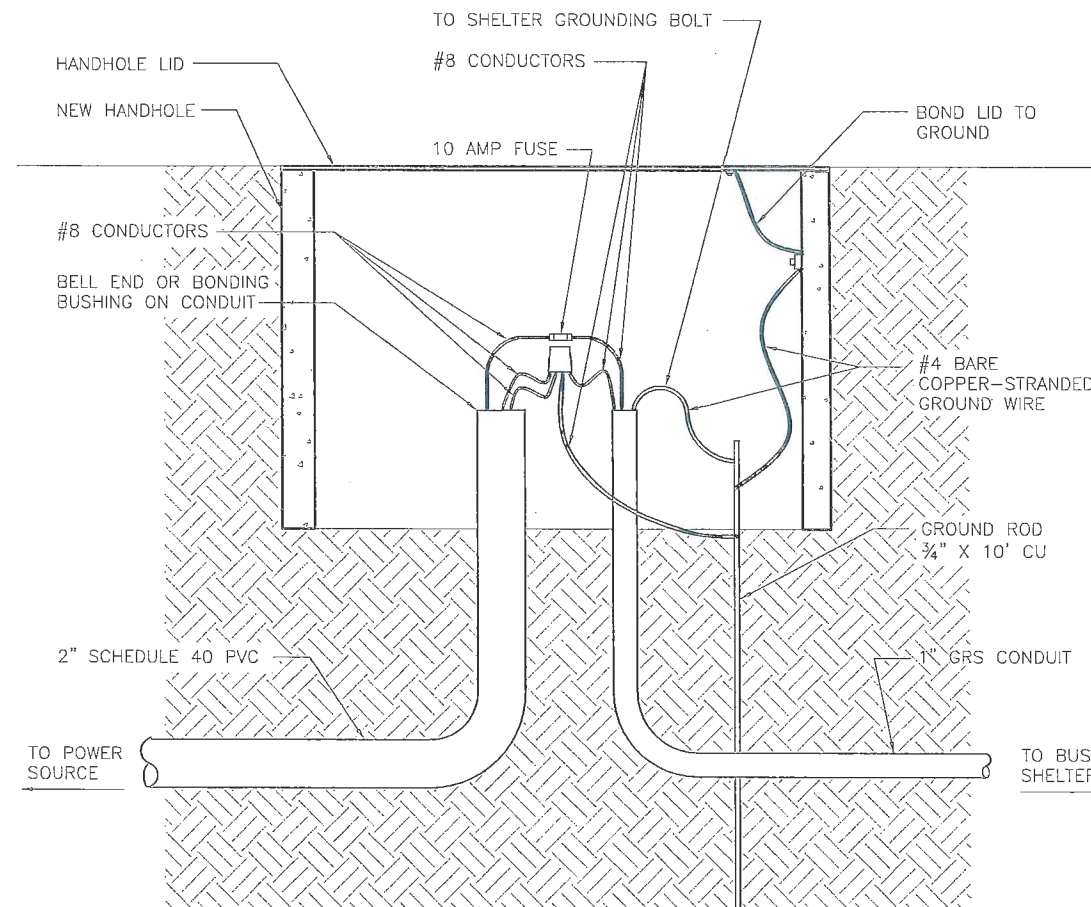
DATE: JUNE 2011
DRAWING NO: D111
SHEET NO: 14 OF 15

No.	REVISION	BY	APP'D	DATE
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ELECTRICAL CONDUIT STUB-UP

DETAIL 1
SCALE: 3" = 1'-0" S5.01



HANDHOLE CONNECTION

DETAIL 2
SCALE: 3" = 1'-0"

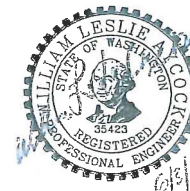
NOT FOR USE WHEN ZONE IS
POWERED BY POWER PEDESTAL

CONSTRUCTION NOTES

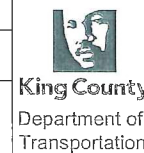
ELECTRICAL CONDUIT

1. ALL NEW CONDUIT INSTALLED UNDERGROUND SHALL HAVE A MINIMUM COVER OF 24 INCHES.
2. PLACE 6" WIDE WARNING TAPE 12 INCHES BELOW GRADE OVER ALL CONDUIT RUNS. TAPE SHALL BE MAGNETEC®, OR PRODUCT EQUIVALENT IN MATERIAL TYPE, SIZE, STYLE AND DURABILITY, SUITABLE FOR THIS SPECIFIED APPLICATION.
3. STUB UP CONDUIT IN LOCATIONS INDICATED BY PLAN 1/S5.01. CONFIGURE AS DESCRIBED BY DETAIL 1/-. INSTALL COUPLING AND THREADED PLUG. SET PVC CAP ¼-INCH BELOW FINISH GRADE DESIGN OF FOUNDATION AT STUB-UP POINTS. FILL CAP CAVITY WITH FOAM AND COMPLY WITH MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS FOR DRYING TIME PRIOR TO POURING CONCRETE.
4. EPOXY ALL CONDUIT JOINTS TO ENSURE WATER CANNOT ENTER THE CONDUIT THROUGH THE CONNECTION. DO NOT EPOXY THE REMOVABLE PLUG.
5. COORDINATE THE REQUIREMENTS OF THIS WORK WITH THE RELATED WORK OF OTHER TRADES, INCLUDING CONCRETE FORMING AND POURING.
6. THE CONTRACTOR SHALL PLACE A GROUNDING ROD IN THE HANDHOLE IN ACCORDANCE WITH NEC 250.53 (C) AND 250.66 (A) AND INSTALL A BELL END OR BONDING BUSHING ON THE CONDUIT. THE CONTRACTOR SHALL BOND ALL METAL PARTS OF THE HANDHOLE TO THE GROUND ROD, PROVIDE SUFFICIENT SLACK IN GROUNDING THE LID TO ALLOW REMOVAL. THE GROUNDED SERVICE CONDUCTOR (NEUTRAL) SHALL ALSO BE BONDED TO THE GROUND ROD. SEE HANDHOLE CONNECTION DETAIL 2/-.
7. CONDUCTOR & FUSE SHALL BE INSTALLED BY KING COUNTY METRO.

No.	REVISION	BY	APP'D	DATE



DESIGNED: W. AYCOCK	PROJECT MANAGER: L. KRENZEL	SCALE: NOT TO SCALE
DRAWN: R. BULGER	APPROVED: L. PARROT	SITE LOCATION NO:
CHECKED: C. REYNOLDS	IBIS NO:	ONE INCH AT FULL SIZE
RECOMMENDED: D. CRIPPER	WORK REQUEST: CONTRACT NO: C00635C11	IF NOT ONE INCH, SCALE ACCORDINGLY



METRO TRANSIT DIVISION
RAPIDRIDE PROGRAM-C AND D LINES
PASSENGER FACILITIES IMPROVEMENTS

HANDHOLE
CONDUIT DETAILS
STANDARD SHELTER

DATE: JUNE 2011	DRAWING NO: D112
SHEET NO: 15	OF 15